99B-165

4.5 PSP Cover Sheet (Attach to the front of each proposal)

Proposal Title: Liberty Island Acquisition and Restoration
Applicant Name: Thomas E. Harvey, U.S. Fish and Wildlife Service
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Amount of funding requested: $ 13,495,605 for 3 years Phase I: $2,623,043 Phase II: $10,872,562

Indicate the Topic for which you are applying (check only one box).

- ☐ Fish Passage/Fish Screens
- ☒ Habitat Restoration
- ☐ Local Watershed Stewardship
- ☐ Water Quality
- ☐ Introduced Species
- ☐ Fish Management/Hatchery
- ☐ Environmental Education

Does the proposal address a specified Focused Action? X yes _____ no

What county or counties is the project located in? Yolo and Solano

Indicate the geographic area of your proposal (check only one box):

- ☐ Sacramento River Mainstem
- ☐ Sacramento Trib: _____
- ☐ San Joaquin River Mainstem
- ☐ San Joaquin Trib: _____
- ☒ Delta: _____
- ☐ East Side Trib: _____
- ☐ Suisun Marsh and Bay
- ☐ North Bay/South Bay: _____
- ☐ Landscape (entire Bay-Delta watershed)
- ☐ Other: _____

Indicate the primary species which the proposal addresses (check all that apply):

- ☐ San Joaquin and East-side Delta tributaries fall-run chinook salmon
- ☒ Winter-run chinook salmon
- ☒ Late-fall run chinook salmon
- ☒ Delta smelt
- ☒ Splittail
- ☐ Green sturgeon
- ☒ Migratory birds
- ☐ Other: _____
- ☒ Spring-run chinook salmon
- ☒ Fall-run chinook salmon
- ☐ Longfin smelt
- ☒ Steelhead trout
- ☒ Striped bass
- ☒ All chinook species
- ☐ All anadromous salmonids

Specify the ERP strategic objective and target (s) that the project addresses Include page numbers from January 1999 version of ERP Volume I and II:
Goal 4, Obj. 1, Sub-obj. 4, Target 1, Programmatic Action 1A, Stage 1 Targ. Research (ERP Vol. II, pg. 99)
Goal 4, Obj. 1, Sub-obj. 1, Target 1, Programmatic Action 1B (ERP Vol. II, pg. 96)

Indicate the type of applicant (check only one box):

☐	State agency	☒	Federal agency
☐	Public/Non-profit joint venture	☐	Non-profit
☐	Local government/district	☐	Private party
☐	University	☐	Other: _____

Indicate the type of project (check only one box):

☐	Planning	☒	Implementation
☐	Monitoring	☐	Education
☐	Research		

By signing below, the applicant declares the following:

1.) The truthfulness of all representations in their proposal;

2.) The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and

3.) The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section 2.4) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

Thomas E. Harvey / Howard K. Stark
Printed name of applicant

Thomas E. Harvey
Signature of applicant

I-015978

TITLE PAGE

Project name:
North Delta National Wildlife Refuge Land Acquisition & Liberty Island Restoration Program

Amount Requested: $13,495,605
Phase I $2,623,043 Phase II $10,872,562

Primary Contact (Stark) for Acquisition and Primary Contact (Harvey) for Restoration

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Department of Fish and Game
1416 Ninth Street
Sacramento, CA 95814

Jones & Stokes Associates
2600 V. Street Suite 100
Sacramento, CA 95818
Phone: 916/737-3000 Fax: 916/737-3073
Contact: Joe Donaldson
joed@jsanet.com

Department of Water Resources
3251 "S" Street
Sacramento, CA 95816

Type of Organization and Tax Status: Public--Federal Government, tax exempt

Tax Identification Number: Not applicable

The U.S. Fish and Wildlife Service's (Service) Sacramento Realty Office will be the lead contact for the acquisitions and Stone Lakes National Wildlife Refuge will be the lead contact for the restoration program. Restoration funds will be used to enhance the original Liberty Island acquisition (Naumachia) funded in 1997 by CALFED in concert with two other Liberty Island properties described in Phase 1 of this funding request.

EXECUTIVE SUMMARY

Project name:
North Delta National Wildlife Refuge Land Acquisition and Liberty Island Restoration Program

Project description: This proposal requests funding for the following tasks: 1) acquire fee title interest in the remaining two privately-owned properties on Liberty Island; 2) conduct restoration planning for Liberty Island; 3) implement the restoration plan for Liberty Island; 4) implement a monitoring program for the restoration; 5) operate and manage the restored island for three years; and 6) acquire fee title interest in two additional properties within the proposed North Delta National Wildlife Refuge (NWR).

In 1997, CALFED provided funding to acquire the majority of Liberty Island from Naumachia, Inc. That acquisition process is underway. If funded, this proposal will facilitate acquisition of the remainder of the island and the development and initiation of a program to restore tidal influence to this vital area in CALFED'S North Delta Corridor. Liberty Island supports significant existing wildlife values and has outstanding potential for restoration, floodplain management, and endangered species recovery. The restoration of Liberty Island is identified by CALFED's Volume II as Stage 1 Targeted Research. The property owners are willing sellers who requested that the U.S. Fish & Wildlife Service (Service) appraise their property. Properties identified in Phase II provide additional opportunities for restoration of tidally influenced and seasonal wetland habitats. CALFED is being asked to provide $2,623,043 in Phase I and $10,872,562 in Phase II to complete the funding process.

Project Size/Location: Liberty Island is located in Yolo and Solano counties, adjacent to Prospect Island and Little Holland Tract. The entire island encompasses 5,209 acres in the northern Sacramento-San Joaquin Delta (CALFED's North Delta Corridor). The two Liberty Island properties (tract 65 and 66) described in this funding proposal encompass 181 and 268 acres respectively. (See map, Appendix A.) The two additional nearby properties (tract 68 and 64) encompass 1,808 and 3,426 acres respectively and are also located in Solano and Yolo counties. Tract 64 is immediately to the north of Liberty Island. Tract 68 is located within the Egbert Tract, to the south of Liberty Island and north of the City of Rio Vista.

Primary Biological/Ecological Objectives: The primary objective of this proposal is to complete acquisition of Liberty Island and to restore the island to tidal shallow-water, tidal emergent wetlands, seasonal wetlands, delta sloughs, and riparian habitats to benefit Delta smelt, winter-run Chinook salmon, Sacramento splittail, and many other Priority I-IV species. A related task is to develop and implement a monitoring program to assess and quantify these restoration efforts. Restoration of Liberty Island will contribute towards the purpose and goals of the proposed North Delta NWR. The purpose of the North Delta NWR is to restore and protect a native diversity of fish, wildlife, plants and their habitats. The refuge goals are to: 1) restore and protect habitats to promote the recovery of endangered, threatened and special concern species; and 2) restore and protect a native diversity of fish, wildlife, plants and their habitats representative of the

Sacramento/San Joaquin Delta ecosystem, with an emphasis on native fish and migratory birds. The secondary objective of this proposal is to acquire additional lands within the proposed North Delta NWR with the intent to restore these properties to tidal shallow-water, tidal emergent wetlands, seasonal wetlands, delta sloughs, and riparian habitats.

This proposal will help meet CALFED's mission of restoring ecological health and improving water management for beneficial uses in the Bay-Delta system by addressing CALFED's Fresh Emergent Wetland Stage 1 Targeted Research/Stage 1 Action (ERP Vol 2, p. 99).

Costs, Adverse, and Third Party Impacts: The Service is requesting $13,495,605 from CALFED to acquire two properties on Liberty Island, fund development of a restoration plan, restore the island, monitor the restoration effects, gain operation and management funds for 3 years, and acquire two additional properties within the proposed North Delta NWR. Anticipated third party impacts to the local tax base by withdrawal of these lands will be off-set by the Refuge Revenue Sharing Act; payments in lieu of taxes will be reimbursed to the communities annually.

Applicant Qualifications: *Sacramento Realty Office:* The Service's staff of eight has over 150 years of combined experience and currently manages over 670 square miles of habitat in California. The office is in the process of completing other CALFED-funded transactions.

Stone Lakes National Wildlife Refuge (NWR): The Stone Lakes NWR staff of seven currently manages abut 1,000 acres of Service-owned land within the refuge project area and co-manages thousands of additional acres with agencies within the project area. The Service has obtained $2.64 million for the restoration, enhancement, and management of refuge lands.

Jones and Stokes Associates: Jones and Stokes Associates has a long, proven track record of habitat restoration projects. They are working on portions of the environmental assessment establishing the North Delta NWR and will develop a restoration plan for Liberty Island.

Department of Water Resources (DWR) and Department of Fish and Game (DFG): Both agencies will assist with monitoring on Liberty Island. Experts from these agencies will provide over 150 years of combined experience with monitoring programs to this project.

Monitoring and Data Evaluation: The acquisitions will be tracked through the Service's Sacramento Realty Office from initiation through purchase. The Stone Lakes NWR staff will work with DWR and DFG to develop and implement a monitoring program for Liberty Island that is compatible with the Prospect Island monitoring program, a project already funded by CALFED. The monitoring will assess research questions involving fish and wildlife use of habitat, plant community development, affects of siltation and erosion on habitat, water quality conditions, phytoplankton species, benthic conditions, organic carbon, and more.

Local Support/Coordination with Other Programs: The following agencies and organizations support the Service's purchase (and restoration of) Liberty Island: U.S. Bureau of Reclamation,

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U.S. Army Corps of Engineers, California Department of Water Resources, California Department of Fish and Game, Wildlife Conservation Board, the Sacramento-Yolo Port Authority, Solano Irrigation District, Metropolitan Water District, and The Trust for Public Lands. The landowners also fully support this project (see letters of support Appendix E).

Acquisition and restoration of Liberty Island supports the goals and objectives of the Recovery Plan for Sacramento/San Joaquin Native Fishes; the Service's Central Valley San Francisco Bay Ecoregion Plan; Central Valley Habitat Joint Venture; USFWS Concept Plan for Waterfowl Wintering Habitat Preservation; Aleutian Canada Goose Recovery Plan; North American Waterfowl Management Plan; Salmon, Steelhead, and Trout Anadromous Fisheries Program Act of 1988; and the goals of the proposed North Delta NWR.

Compatibility with CALFED objectives: Acquisition of these properties can help improve the health of the Bay-Delta ecosystem, benefit several Priority I-IV species and Delta habitats, and yield broad ecosystem benefits. The proposal addresses four of the six CALFED goals and 10 of the objectives related to these goals including: priority I-IV species, natural floodplain/processes, Bay-Delta hydraulics, aquatic food web, levees, tidal perennial wetlands, freshwater emergent wetlands, seasonal wetlands, delta sloughs, and riparian corridors. Specifically, the proposal addresses CALFED's Fresh Emergent Wetland Stage 1 Targeted Research/Stage 1 Action (ERP, Vol 2., p. 99). Additionally, CALFED has recognized the importance of this area by providing funds to the Service to purchase the bulk of Liberty Island and to the DWR, to include some Liberty Island assessments as part of the Prospect Island monitoring program. This project complies with relevant laws and regulations, including NEPA/CEQA, will not prejudice CALFED's long term program, and involves only willing sellers.

PROJECT DESCRIPTION

PROPOSED SCOPE OF WORK

Project Description/Approach: This proposal requests funding to: 1) acquire fee title interest in the remaining two privately-owned properties on Liberty Island; 2) conduct restoration planning for Liberty Island; 3) implement the restoration plan for Liberty Island; 4) implement a monitoring program for the restoration; 5) operate and manage the restored island for three years; and 6) acquire fee title interest in two additional nearby properties within the proposed North Delta NWR. The intent of this proposal is to restore tidal influence to this strategically-located 5,209-acre island in CALFED'S North Delta Corridor, located in Yolo and Solano counties. The entire island encompasses 5,209 acres in the northern Sacramento-San Joaquin Delta (CALFED's North Delta Corridor). There are six tasks, listed in priority order, involved with this project:

Task #1 -- Liberty Island Acquisition: In order to develop a successful ecosystem management program, it is necessary to acquire the two remaining properties on the island. These islands encompass 181 acres and 268 acres, respectively. Please recall that the majority of Liberty Island, owned by Naumachia, Inc., is in the process of being purchased by the Service with a CALFED grant. The two remaining properties are being offered to the Service by willing sellers. The Service has initiated the appraisal process and hopes to have approved appraisals and make offers by April 2000. The Service will follow standard procedures for acquisition and comply with the "Uniform Appraisal Standards for Federal Lands Acquisitions."

Task #2 -- Liberty Island Restoration Planning: Concurrent with the real estate process, the Service is contracting with Jones and Stokes Associates to produce an environmental assessment with necessary compliance documents and restoration plan to restore tidal shallow water , tidal emergent wetlands, seasonal wetlands, delta sloughs, and riparian habitats to Liberty Island. This contract will commence in July 1999. The draft environmental assessment/restoration plan will be released in January 2000; the final environmental assessment/restoration plan will be released in March 2000. Following is a summary of tasks which Jones and Stokes Associates is being asked to complete:

- Subtask A: Initiate management of project (Initial meeting, scope/schedule, site tour, coordination meetings).
- Subtask B: Conduct public involvement program (Conduct meetings, prepare mailings).
- Subtask C: Develop and analyze three restoration alternatives (Identify goals, develop three restoration alternatives, identify and analyze benefits, socioeconomic impacts, cultural resource impacts, and prepare cost estimates for three alternatives)
- Subtask D: Conduct hydraulics analysis for three restoration alternatives (activate hydraulics model, update topography, extend model grid and calibrate, select roughness coefficient, select restoration designs/mitigation measures, simulate restoration design/mitigation measures).
- Subtask E: Prepare restoration plan report (prepare administrative draft restoration plan, draft restoration plan, and final plan).
- Subtask F: Prepare Environmental Assessment/Restoration Plan (EA) (Prepare

administrative draft EA, prepare draft EA, prepare and public notice of availability, prepare final EA).

Task #3 – Liberty Island Restoration: Following acquisition and adoption of the environmental assessment, the Service will begin the restoration process in June 2000 and end approximately by October 2000. The Service envisions a passive restoration approach that would allow wetland and riparian vegetation to establish naturally. Although the restoration plan will not be finalized until the planning process is completed, restoration may include creating additional breaches in the levees, filling agricultural water delivery/drainage ditches, leveling an existing road bisecting the property, and excavating meandering sloughs to improve habitat quality and native fish access and to prevent fish strandings. Construction costs will be limited if the island is restored when flooded.

Task #4 – Liberty Island Monitoring: A monitoring program is being developed that parallels monitoring efforts for restoration of nearby Prospect Island. This program evaluates approximately 10 hypotheses or questions related to restoration, covering aspects of fish and wildlife habitat use, vegetation, siltation and erosion, water quality conditions, phytoplankton, zooplankton, benthic conditions, and organic carbon.

The Department of Water Resources is providing partial first year funds to monitor fisheries and full first year funds to monitor zooplankton trends on Liberty Island using grant monies provided by CALFED for this purpose. The Prospect Island monitoring project has been reviewed by Dr. Si Simenstad, University of Washington, Dr. Josh Collins, San Francisco Estuary Institute, and several Interagency Ecological Program Project Work Teams. The Service, Department of Water Resources and Department of Fish and Game will develop a Cooperative Agreement allowing the Service to adopt monitoring techniques developed for Prospect Island and share monitoring implementation costs.

Task #5 – Liberty Island Operations and Management: This proposal seeks three years of operations and management funds for salaries, equipment/supplies for refuge management, maintenance, law enforcement, biological monitoring, public use, and educational programs. Refuge management may include environmental compliance; coordination and cooperation with other agencies, adjacent landowners, private organizations, and individuals; staff supervision; budgeting; and purchasing. Maintenance programs may include controlling invasive plants; managing vegetation; posting and maintaining signs and road access; erecting and maintaining fences and gates; collecting trash; equipment acquisition; and maintenance. Law enforcement may include enforcement of trespass, vandalism, hunting, fishing, and boating regulations. Biological monitoring may including limited bird surveys, fish sampling, and vegetation mapping. Recreational programs may include development of visitor improvements for hunting, fishing, and wildlife observation; and conducting tours and interpretive walks.

Task #6 -- Additional North Delta NWR Acquisitions: Additional tidal and seasonal wetland restoration potential exists on two tracts near Liberty Island within the proposed North Delta NWR. These properties are being offered to the Service by willing sellers. The Service would

initiated the appraisal process in July 1999 and hope to make offers by February 2000. The Service will follow standard procedures for acquisition and comply with the "Uniform Appraisal Standards for Federal Lands Acquisitions."

Schedule of tasks and deliverables: This project can be divided into the six aforementioned tasks, to be completed in two phases.

PHASE 1: Tasks 1-5
Schedule for completing Task 1 - Liberty Island Acquisitions:

Property TASK 1	Appraisal Complete	Appraisal Approved	Option signed	Title search	Survey	Escrow & closing	Record deed	Purchase property
Property 1 (tract 65)	Jan. 2000	Apr. 2000	Apr. 2000	Apr. 2000	Apr. 2000	May 2000	May 2000	May 2000
Property 2 (tract 66)	Jan. 2000	Apr. 2000	Apr. 2000	Apr. 2000	Apr. 2000	May 2000	May 2000	May 2000

Schedule for completing Task 2 - Liberty Island Planning:
July 2000 Jones and Stokes initiate the planning process for Liberty Island restoration.
Jan. 2000 Draft environmental assessment/restoration plan released for public review.
Mar. 2000 Final environmental assessment/restoration plan released.
Apr. 2000 Finding of No Significant Impact anticipated to be signed.

Schedule for completing Task 3 - Liberty Island Restoration:
June 2000 Restoration of Liberty Island: construction phase initiated.
Oct. 2000 Construction phase completed.

Schedule for completing Task 4 - Liberty Island Monitoring:
Oct. 2001 Monitoring initiated.
Sep. 2002 Monitoring completed.

Schedule for completing Tasks 5 - Operation and Maintenance of Liberty Island:
June 2000 Upon acquisition, the Service would operate and maintain Liberty Island.
June 2003 Funds for operation and maintenance expired.

PHASE 2: Task 6 (see next page)

PHASE 2: Task 6

Schedule for completing Task 6 - additional acquisitions:

Property TASK 6	Appraisal Complete	Appraisal Approved	Option signed	Title search	Survey	Escrow & closing	Record deed	Purchase property
Property 3 (tract 68)	Oct. 1999	Dec. 1999	Feb. 2000	Mar 2000	May 2000	June 2000	June 2000	June 2000
Property 4 (tract 64)	Oct. 1999	Dec. 1999	Feb. 2000	Mar 2000	May 2000	June 2000	June 2000	June 2000

This project could be phased and funded over a three year period as some tasks are separable. The tasks could be funded separately as follows.

Task 1: Purchase of two properties. Although the real estate transactions for each are separate, both properties should be purchased simultaneously and immediately to protect these properties and enable unencumbered restoration of the island as an ecosystem.

Task 2: Liberty Island restoration planning and environmental compliance.

Tasks 3 and 4: As specified in CALFED's programmatic action regarding restoration of Liberty Island, this is targeted research. The restoration effort must be accompanied by a monitoring program to assess and quantify the results. Task 4 has eight monitoring subtasks, each is separable and could be funded individually. Monitoring subtasks A-D are first priority, E-G are second priority, and H-I are third priority tasks.

Task 5: Operation and maintenance of Liberty Island.

Task 6: Purchase of two properties. Task 6 is separable; the two properties could be acquired independently.

Location and/or Geographic Boundaries of Project:

Liberty Island is located in Yolo and Solano counties, adjacent to Prospect Island and Little Holland Tract. The entire island encompasses 5,209 acres in the northern Sacramento-San Joaquin Delta (CALFED's North Delta Corridor). The two Liberty Island properties described in this funding proposal encompass 181 and 268 acres, respectively. The two additional properties (tract 68 and 64) encompass 1,808 and 3,426 acres and are located in Solano and Yolo counties, respectively. Tract 64 is immediately to the north of Liberty Island. Tract 68 is located within the Egbert Tract, to the south of Liberty Island and north of the City of Rio Vista. (See map, Appendix A..)

ECOLOGICAL/BIOLOGICAL BENEFITS

ECOLOGICAL/BIOLOGICAL OBJECTIVES

Primary ecological/biological objectives: The primary objective of the acquisition and restoration of Liberty Island is to restore the 5,209 acre island to tidal shallow-water, tidal emergent wetlands, seasonal wetlands, delta sloughs, and riparian habitats. Restoration of Liberty Island will contribute towards the purpose and goals of the proposed North Delta NWR. The purpose of the North Delta NWR is to restore and protect a native diversity of fish, wildlife, plants and their habitats. The refuge goals are to: 1) restore and protect habitats to promote the recovery of endangered, threatened and special concern species; and 2) restore and protect a native diversity of fish, wildlife, plants and their habitats representative of the Sacramento/San Joaquin Delta ecosystem, with an emphasis on native fish and migratory birds.

Need for/benefits of the project: The Sacramento/San Joaquin Delta is a system of diverse aquatic habitats that supports over 45 fish species. Alterations of the natural channels and intensive agricultural development have significantly changed the hydrology and reduced the wetland complexity of the Delta. Current land uses have reduced spawning/nesting, rearing, and feeding habitat for many vulnerable Delta fish species and migratory birds.

The acquisition and restoration of Liberty Island will allow the Service to meet National Wildlife Refuge System goals and CALFED objectives by allowing natural ecosystem processes to restore and maintain tidal wetland, mudflats and riparian corridors. When combined with the restoration of Prospect Island (a partially CALFED funded project) and Little Holland Tract, these strategically located islands will provide a 7,800-acre area of contiguous tidally influenced habitats that is expected to benefit the recovery and conservation of Delta smelt, splittail, winter-run chinook salmon, as well as 20 other CALFED priority species/guilds/communities. The proposal addresses CALFED's Fresh Emergent Wetland Stage 1 Targeted Research/Stage 1 Action (ERP, Vol 2., p. 99).

Alternatives: When meeting with prospective sellers, the Service offers several options for protecting land, including easements, partnering agreements, technical assistance, grant programs, and fee title acquisition. It is the Service's goal to protect lands by acquiring the least amount of interest in the property. The four landowners prefer fee title acquisition of their properties.

The Service anticipates passively restoring Liberty Island to tidally-influenced wetland, seasonal wetland, and riparian habitats. The passive restoration approach may, however, require breeching levees, lowering levees, re-creating delta sloughs, or other modification to improve fish habitat or flood conveyance flows. The Service proposes to develop and analyze three restoration alternatives, select a preferred restoration approach, and prepare environmental compliance documents necessary to restore Liberty Island.

Basis for expected benefits: The Service has 516 units in the National Wildlife Refuge System. Unlike many other agencies which protect land, the Service also commits personnel and funds

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toward operation and management of these refuge units *in perpetuity*.

Habitats, species, and stressors:

Habitat Benefits:

Primary benefits to tidal perennial aquatic habitat, fresh emergent wetland habitat, seasonal wetland, and essential fish habitat. Breaching of levees and restoration efforts will restore tidally influenced aquatic habitat. Approximately 60 to 80 percent (3,125 to 4,167 acres) of Liberty Island will be restored to tidally-influenced habitats and 15 to 35 percent (781 to1,823 acres) will be restored to seasonal wetlands.

Secondary benefits to riparian and riverine aquatic habitat and delta sloughs. At higher elevations at the north end of Liberty Island and on remnant levees, approximately two to five percent (104 to 240 acres) of Liberty Island, will be maintained in riparian habitat. Delta sloughs may be recreated in tidal areas depending on the restoration alternative selected.

Species Benefits:

Priority I: The project will provide primary benefits to delta smelt, Sacramento splittail, and Sacramento winter-run chinook salmon by creating rearing habitat for winter-run chinook salmon and spawning habitat for Delta smelt and Sacramento splittail. Increases in tidal habitat may boost juvenile fish survival by dispersing predation pressure and providing other food sources. Secondary benefits to spring-run, fall-run and late-fall-run Sacramento chinook salmon.

Priority II: Primary benefits to California black rail, Swainson's hawk, tidal brackish and freshwater marsh special-status plant species (Mason's lilaeopsis, delta tule pea), and valley elderberry longhorn beetle.

Priority III: Primary benefits to western least bittern, giant garter snake, and western pond turtle. Secondary benefits to Sacramento perch, least Bell's vireo, California yellow warbler, and little willow flycatcher.

Priority IV: Primary benefits to native resident fish species, waterfowl, shorebirds and wading birds, neotropical migratory birds, planktonic organisms, and tidal, brackish and freshwater marsh habitat plant community group.

Primary Stressors Reduced:

Water Diversions: Primary benefit will be reduced water diversions formerly needed to irrigate agricultural lands on Liberty Island. Riparian water rights presently used to farm approximately 4,000 acres of row crops will be left in the Delta to improve overall water quality for all beneficial uses. Tidal action will restore native vegetation and will allow for a more natural hydrology.

Levees, Bridges, and Bank Protection: Primary benefit of restoration will be increased shoreline riparian habitat on remnant levees.

Stranding: Primary benefit will be the elimination/reduction of stranding of native fish on Liberty Island because it will be restored to tidal perennial aquatic habitat and fresh emergent wetlands. Breaches in the levees will allow for native fish to enter the Delta.

Harvest of Fish and Wildlife: Secondary benefit will be reduced illegal harvest of anadromous fish

and wildlife by increasing law enforcement in the area.

Potential benefits to third parties: Restoration of several thousand acres of tidal action will improve and increase the aquatic and terrestrial habitats and ecological functions in the Delta. Also, breaching and/or reducing levees on the island may reduce the maintenance of reclamation district's levees and reduce the risk of catastrophic levee failures. Local communities will benefit from the increased opportunities for wildlife-oriented recreation and environmental education within the North Delta NWR. The entire project can serve as a model and offers numerous public outreach opportunities. If maintained, all of this improvements should be long-lasting.

Potential benefits/other Ecosystem Restoration Programs: Endangered Species Recovery Plan Implementation, Anadromous Fisheries Restoration Plan, and National Marine Fisheries Service Proposed Recovery Plan for the Sacramento River Winter-run Chinook Salmon, Central Valley Project Improvement Act, Central Valley Habitat Joint Venture, North American Wetland Conservation Act, Aleutian Canada Goose Recovery Program, Delta Wildlife Habitat Protection and Restoration Plan, USFWS Concept Plan for Waterfowl Wintering Recovery Habitat Preservation, U.S. Army Corps of Engineers Yolo Basin Wetlands Creation and Restoration Project, California Senate Concurrent Resolution 28, State Water Resources Control Board, Regional Water Quality Control Board, Salmon and Steelhead Restoration Act of 1988.

Project will be self-sustaining: The Service expects natural processes to restore and maintain vegetation on Liberty Island. In addition, the Service is committed to the conservation of tidal emergent and seasonal wetland habitats on Liberty Island as part of the proposed North Delta NWR and will manage these lands in perpetuity.

Project implements an ecosystem-based approach/uses adaptive management: Liberty Island will be managed as part of the new refuge and serve as a vital link to a broad landscape corridor with similar habitats stretching from the Yolo Basin to the Cosumnes Basin. This offers an important opportunity to create landscape linkages managed by common principles. The Service is committed to the restoration and maintenance of native habitats by restoring or recreating ecological processes whenever feasible; a "species" approach to management may overlook the life history requirements for other fish, wildlife and plant species. This proposal, if implemented, will benefit several native species. The Service will adopt an adaptive management approach to evaluate restoration efforts through monitoring, assessing data, and reevaluating methods to improve habitat for native fish. The Service proposes to compare the Liberty Island and Prospect Island restoration projects, a passive and active restoration approach respectively, in terms of native fish and wildlife abundance and native vegetation response.

Hypotheses: The response of native fish, wildlife, and habitat will be similar for a passive restoration approach (Liberty Island) and an active restoration approach (Prospect Island).

Linkages

Linkage to past/future projects: CALFED FY 97 and 98 Restoration Coordination Program funds were provided for acquisition of Liberty Island, restoration of Prospect Island, restoration of shaded riverine aquatic (SRA), tidal slough habitat, and perennial grasslands along/adjacent to Barker Slough and Calhoun Cut, restoration of SRA habitat along a Cache Slough levee; and relocation and screening of diversions on Hastings Tract to reduce the entrainment of delta smelt. Together, these aquatic habitats will provide linkages with the Yolo Basin, Stone Lakes/Cosumnes Basin, and other Central Valley wetlands which are the focus many other programs, such as the Central Valley Habitat Joint Venture, Riparian Habitat Joint Venture, Endangered Species Recovery Plan Implementation, Anadromous Fisheries Restoration Plan, and National Marine Fisheries Service Proposed Recovery Plan for the Sacramento River Winter-run Chinook Salmon, etc.

Current status of project: In 1997, CALFED committed funds for the acquisition of a 4,760 acre parcel of Liberty Island with the intent that the Service would restore this property to tidally influenced habitats and manage the island as part of the proposed North Delta NWR. An environmental assessment is currently being developed that will identify the approved boundary for the refuge. The Service expects to release a draft environmental assessment (EA) to the public in April, the final EA in June 1999, and the Finding of No Significant Impact (FONSI) is expected to be signed in July 1999. After the FONSI is signed, the Service will purchase the 4,760-acre parcel on Liberty Island with CALFED funds.

Phase 1 of this 1999 CALFED grant application proposes that the Service will: 1) complete the acquisition of the remaining 449 acres of Liberty Island; 2) develop, analyze, and select a restoration plan, including conducting hydraulic modeling and preparing necessary environmental compliance documents; 3) restore Liberty Island to tidally influenced habitats; 4) implement a monitoring program to evaluate the restoration; and 5) operate and manage Liberty Island for three years. Phase 2 of this 1999 funding proposal requests funds to make two additional acquisitions within the proposed North Delta NWR project area.

CALFED goals, strategic objectives, targets, and actions: The proposal helps CALFED achieve its overall objectives by satisfying the following:

Goal 1: Threatened and endangered species: Achieve recovery of at-risk native species dependent on the Delta...(ERP p. 28).

Goal 4: Habitats: Protect or restore functional habitat types...(ERP p. 30)

Obj. 1: Restore large expanses of all major habitat types in the Delta...(vol. I p. 103).

Obj. 3: Increase the area of tidal marsh (freshwater, brackish, salt) by removing or breaching levees (opening them to tidal action)...(vol. I p. 103).

Sub-Obj. 1: ...increase the area of tidal perennial aquatic habitat as an integral component of restoring large expanses of all major habitat types in the Delta... (vol. I p. 114).

Target 1: Restore 1,500 acres of shallow-water habitat in the North Delta Ecological

Management Unit...(vol. II p. 96)

Programmatic Action 1B: Restore 1,000 acres of shallow-water habitat in the downstream (south) end of the Yolo Bypass (Little Holland and Liberty islands)...(vol. II p. 96)

Goal 4: Habitats: Protect or restore functional habitat types...(ERP p. 30)

Obj. 1: Restore large expanses of all major habitat types in the Delta...(vol. I p. 103).

Obj. 3: Increase the area of tidal marsh (freshwater, brackish, salt) by removing or breaching levees (opening them to tidal action)...(vol. I p. 103).

Sub-Obj. 4: ...increase the area of fresh emergent wetland habitat as an integral component of restoring large expanses of all major habitat types in the Delta... (vol. I p. 139).

Target 1: Increase existing tidal freshwater marsh habitat in the Delta by restoring 30,000 to 45,000 acres of lands designated for floodplain restoration. (vol. II p. 99)

Programmatic Action 1A: Develop tidal freshwater marshes in the North Delta Ecological Management Unit. (vol. II p. 99)

Stage 1 Targeted Research: Develop a plan to design and evaluate tidal marsh restoration of Prospect Island, Liberty Island, and Little Holland Tract ...by conducting a study of the relationship between salinity gradients, salinity variability, and physical habitat and their relationship to species utilization in the tidal North Delta. (vol. II p. 99).

Satisfies other CALFED ecological/biological objectives:

Goal	Obj.	Vol.	Page	Sub-Obj.	Vol.	Page	Target	Vol.	Page
2	6	1	89				1	2	91
2	1	1	93				2, 4	2	93
2	2	1	100				1	2	95
3	6	1	439				1	2	110
4	1	1	103	1	1	122	1	2	97
4	1,5	1	103	3	1	144	1	2	101
4	1	1	103	2	1	151	6	2	103

Proposal relates to legal Service mandates: Liberty Island will be managed as part of the proposed North Delta NWR as an unit of the National Wildlife Refuge System. The purpose of the North Delta NWR is to restore and protect a native diversity of fish, wildlife, plants and their habitats. The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

System-Wide Ecosystem Benefits

Ecosystem benefits/other programs within the area: Liberty Island is in the heart of the

CALFED's North Delta Corridor. Land protection and restoration efforts at Liberty Island will complement and enhance region wide efforts to preserve and restore ecosystems and landscape corridors. This proposal also complements similar efforts on Prospect Island, Little Holland Tract, and the Yolo Basin Wildlife Area.

Compatibility with Non-Ecosystem Objectives: The Liberty Island Project may benefit other CALFED watershed objectives, including water quality and levee system integrity. The wetland habitat on the island may filter out sediments or pollutants in the water.

Compatibility with Non-Ecosystem Objectives

Benefits for/Conflicts with other CALFED objectives: The Liberty Island project does not appear to conflict with any other CALFED objectives.
A. Water quality will be monitored to assess any water quality impacts or improvements.
B. Water supply reliability will not be affected.
C. Service will conduct ongoing operations and maintenance of the project. The bathymetry monitoring element will assess erosion and sedimentation of project features.

Potential benefits to third parties: Elimination or reduction in height of the northern Liberty Island levee could reduce maintenance costs of the project levee maintained by Reclamation District 2068 because of reduced turbulence associated with the levee during high flood flows.

Technical Feasibility and Timing

Other alternatives not selected:
Acquisition: As previously mentioned, the Service offers potential sellers a suite of alternatives for protecting or restoring land. These alternatives were offered to each of the landowners, who have expressed wishes to sell in fee title to the Service.

Restoration: The evaluation of alternatives is one of the objectives of this proposal. Jones and Stokes Associates will develop and analyze the feasibility, benefits and costs associated with a minimum of three alternatives to restore Liberty Island to Delta tidally influenced habitats.

CEQA, NEPA, and other environmental compliance documents required: The Service and Jones and Stokes, Inc. are currently developing an EA on the Proposed North Delta National Wildlife Refuge which evaluates the environmental impacts of establishing the refuge, identifies refuge boundary alternatives, and identifies a preferred boundary alternative for the proposed refuge. The EA and FONSI are anticipated to be finalized and signed by July 1999. Subsequent habitat restoration and enhancement may require preparation of the following documents/permits: NEPA and CEQA documentation; Clean Water Act/Section 404 permit; Endangered Species Act/Section 7 consultation; Streambed Alteration permits; National Historic Preservation Act (Section 106) compliance; and Regional Water Quality Control Board Certification.

Project constraints: Possible constraints posed by the Yolo Bypass and existing flood conveyance easements held by the California State Reclamation Board will need to be addressed. These easements generally prohibit landowners from installing structures, building levees, allowing the growth of tall vegetation, or implementing any other land use that could impair the flood conveyance capacity of the Bypass. Tall vegetation in this case would include plants more than approximately 1 foot in height. The Reclamation Board typically requires landowners who wish to restore natural vegetation to complete a hydraulic modeling analysis of potential impacts on flood conveyance. To address this, Jones and Stokes Associates will reactivate and expand the two-dimensional finite-element flow models developed and calibrated in 1996 by the U. S. Army Corps of Engineers (Corps) for Liberty Island and adjacent areas. The Corps' model will be used to simulate new restoration alternatives for Liberty Island.

Resolving other outstanding implementation issues: One of the objectives of the EA is to address all known implementation issues and to establish a framework for handling those which occur after its adoption.

Monitoring and Data Collection Methodology

Topic: The following will be investigated: Stage 1 Targeted Research (Vol. 2 Pg 99) -- Develop a plan to design and evaluate tidal marsh restoration of Liberty Island. Study relationship between salinity gradients, salinity variability, and physical habitat and their relationship to species utilization in the tidal North Delta.

Biological/ecological objectives:
The following table supports the primary biological/ecological objectives listed on page 9.

Hypothesis/ Question to be Evaluated	Monitoring Parameter(s) and Data Collection Approach	Data Evaluation Approach	Data Priority
Fish: Quantify use of habitat by various fish species. Compare relative fish abundance between habitats in Liberty Island and Prospect Island.	Monitor larval, juvenile, and adult life stages. Data sampling includes use of purse seine (delta smelt), gill nets (splittail), push nests, beach seine, light traps, egg and larval nets and electroshocking.	Data collected, data analyzed, and reports prepared will adhere to the IEP QA/QC requirements.	1
Wildlife: Quantify wildlife use in each of the following habitats: open water, mudflats, emergent marsh and riparian. Assess use to vegetation and water quality.	Data collection to determine species presence and index to abundance and may include point counts, canoe surveys, incidental surveys, rail counts, walking transects, live trapping, and pit fall traps.	Data collected, data analyzed, and reports prepared will adhere to the IEP QA/QC requirements	1
Vegetation: Track quality and quantity of plant communities that develop.	Map baseline plant communities within the project site to compared to Prospect Island and Liberty Island in subsequent years. Site specific plant community characterization will also be conducted.	Data collected, data analyzed, and reports prepared will adhere to the IEP QA/QC requirements	1
Water Quality: Determine water quality conditions in different aquatic habitats on Liberty Island. Assess water quality conditions resulting from placement of levee breaches.	Monitoring parameters include water temperature, dissolved oxygen, pH, turbidity, stage, and air temperature. Parameters will be measured on a continuous year round basis.	Data collected, data analyzed, and reports prepared will adhere to the IEP QA/QC requirements	1
Phytoplankton: Evaluate phytoplankton species composition, biomass, primary productivity, nutrients, and sediments concentrations.	Discrete monitoring will be conducted year round on a monthly basis. Samples for chlorophyll a will be taken at 1 m depths. Additional water samples will be taken for phytoplankton species identification.	Data collected, data analyzed, and reports prepared will adhere to the IEP QA/QC requirements	2

Zooplankton: Determine which zooplankton species, mysid shrimp, and amphipods are utilizing the various habitats.	Zooplankton samples will be collected year-round on a monthly basis with Clark-Bumpus nets, a ski mounted Neomysis net or egg and larval net w/ 505 um mesh and a 151/min. capacity pump.	Data collected, data analyzed, and reports prepared will adhere to the IEP QA/QC requirements	2
Benthic: Evaluate benthic macrofauna and substrate composition in the various habitats. Assess benthic community development with substrate composition.	Benthic samples will be collected on a monthly basis. Four benthic samples will be collected at each site with a Birge-Ekman dredge. Samples will then be washed and preserved in formalin.	Data collected, data analyzed, and reports prepared will adhere to the IEP QA/QC requirements	2
Bathymetry: Evaluate changes in habitat features due to siltation and erosion.	A horizontal and vertical control around the project will be completed before the island is flooded. Baseline evaluation of representative project features (berms, levees, shallow water, excavated channel) will be established after flooding. Quarterly elevation surveys will be conducted to monitor erosion, accretion, and subsidence.	Data collected, data analyzed, and reports prepared will adhere to the IEP QA/QC requirements	3
Organic Carbon: Determine if Liberty Island is a source of organic carbon to the Delta channels.	Continuous samples will be collected by autosamplers at the levee breaches during incoming and outgoing tides. Samples will be analyzed for dissolved and particulate organic carbon and ultraviolet absorbance.	Data collected, data analyzed, and reports prepared will adhere to the IEP QA/QC requirements	3

Monitoring and coordination with other monitoring efforts: Monitoring will be initiated simultaneously with the Prospect Island monitoring project which is anticipated to begin October 2001 and be completed in September 2002.

Task	Subtasks	Sampling Schedule
A. Fish Monitoring	1. Quantify/quality general fish species use year round. Document ratio of native to non-native species.	Quarterly (January 2002, April 2002, July 2002, October 2002). Once per quarter on spring and neap tides.
	2. Quantify spawner use by delta smelt and splittail	Mid-February to mid-June 2002. Bi-monthly on spring and neap tidal cycles.
	3. Quantify larval rearing by delta smelt and splittail.	Mid February to mid-June 2002. Weekly.
	4. Quantify salmon fry/smolt use	December 2001- May 2002. Weekly
B. Wildlife Monitoring	Quantify/qualify wildlife use in open water, mudflats and emergent marsh, and riparian habitats.	Quarterly (January 2002, April 2002, July 2002, October 2002).

Task	Subtasks	Sampling Schedule
C. Water Quality Monitoring	1. Characterize water quality conditions at the breaches on a real-time basis.	Continuous sampling from Fall 2001-Fall 2002.
	2. Characterize water quality conditions in open water, mudflats and emergent marsh, and riparian habitats.	Four portable stations will monitor on a continuous basis year-round.
D. Vegetation Monitoring	1. Characterize plant communities in different habitats and how they change over time. Document the ratio of native to exotic species.	Take color aerial photos and delineate community types at beginning and end of monitoring (Fall 2001, Fall 2002)
	2. Establish whether plant communities are sustaining and functional.	Fall 2002
E. Phytoplankton/ Sediments/Nutrients Monitoring	Evaluate phytoplankton production, species composition and growth rates, nutrients and sediment concentrations.	Monthly sampling.
F. Zooplankton Monitoring	Evaluate zooplankton species composition, mysid shrimp, and amphipods	Monthly sampling.
G. Benthic Monitoring	Evaluate benthic macrofauna and substrate composition.	Monthly sampling.
H. Bathymetry Monitoring	Monitor changes in different habitats and features within Prospect Island due to siltation and erosion.	Baseline survey Fall 2001 and annual survey Fall 2002.
I. Organic Carbon Monitoring	1. Determine if the island is a source of organic carbon to the Delta.	Daily for a two-week period each month between April-September 2002.
	2. Quantify carbon and potential THM production.	Monthly. THMFP and HAAFP analyses will be conducted twice over the year.
J. Project Management	Inspection of work in progress, validation of costs, preparation and review of reports and responses to project specific questions.	Ongoing

Report frequency, content and format: Quarterly reports for each monitoring element will be published in the IEP newsletter and an annual report will be submitted to CALFED along with the Prospect Island monitoring project upon completion of the monitoring project.

Data sources/how they will be used: Data will be used to evaluate the tidal marsh restoration of Liberty Island and to contrast a passive restoration approach with an active restoration approach (Prospect Island). Relationships among salinity gradients, salinity variability, and physical habitat and their relationship to species use of the tidal North Delta will be examined.

Monitoring/peer review: Data collected, data analyzed, and reports prepared will adhere to the IEP QA/QC requirements.

Local Involvement

Counties and Delta Protection Commission notified: Letters have been sent to Skip Thomson, Solano County Board of Supervisors, Dave Rosenberg, Yolo County Board of Supervisors, and the Delta Protection Commission, as outlined in the proposal guidelines (See Appendix B: Letters of Notification). It should be noted that the Service has an ongoing relationship with these entities and communicates with and briefs them on timely issues.

Support: The Service is also currently working with the following agencies and organizations, which support the goals of the North Delta NWR, to coordinate activities on and near the proposed refuge: CALFED, California Department of Water Resources, U.S. Bureau of Reclamation, U.S. Army Corps of Engineers, California Waterfowl Association, Ducks Unlimited, National Audubon Society/California Office, The Nature Conservancy, The Trust for Public Land, The Resources Agency, California Department of Fish and Game, Central Valley Habitat Joint Venture, Riparian Habitat Joint Venture, Yolo Basin Foundation, Solano County Farmlands and Open Space Foundation, Stone Lakes NWR Association, Stone Lakes Alliance, numerous hunters, anglers, and 12 local private landowners (willing sellers). These acquisitions and subsequent restorations will contribute to the goals of many Federal, State, and local programs and plans and support or enhance community public outreach/environmental education programs. (Appendix E)

Opposition: The Farm Bureau and some reclamation districts, local landowners, and elected officials have raised issues or concerns during the scoping phase for the proposed North Delta NWR. The issues include economic effects of converting agricultural land to habitat; relationship of the refuge to CALFED (concern that refuge restoration acreage will not count towards CALFED objectives); hydrological effects of tidal restoration; effects on county tax revenues; access for recreational boating, fishing, and waterfowl hunting; potential screening of diversions; Rio Vista flood protection; waterfowl depredation on crops; and project effects on land values.

Outreach plan: Refuge partners and other interested parties are routinely briefed on timely issues. The Service has established outreach and public involvement guidelines for developing new refuges that are being followed. Briefings occur in one-on-one meetings, group meetings, or by mailing. At least two public meetings have been held regarding the establishment of the refuge; plans for Liberty Island were discussed at these meetings. Public notice of these meetings was printed in local newspapers; the meetings were also covered in subsequent news stories. The Service maintains a mailing list of 360 individuals, agencies, news media, and other organizations which receive routine updates and other mailings(See sample, see Appendix C). Jones and Stokes Associates will conduct two additional public meetings and three meetings with local involvement groups. The public will have opportunities to comment on the EA to restore Liberty Island.

Third party impacts: The Service works only with willing sellers. Adjacent landowners and others will continue to have publicized opportunities to make comments, both for the EA establishing the refuge and the EA for Liberty Island. Anticipated third party impacts to the local tax base by withdrawal of private lands would be off-set through the Refuge Revenue Sharing Act and appropriate payment in lieu of taxes would be reimbursed to the communities annually.

Cost

Budget:

Task	Direct Labor Hours	Direct Salary/ Benefits	Service Contracts	Material/ Acq. Costs	Misc. /other Direct Costs	Over-head Indirect Costs	Total Cost
Task 1: Acquisition two tracts on Liberty Island							
A. Tract #65: 181 acres	343	$12,000	$15,000	$362,000			$ 389,000
B. Tract #66: 268 acres	343	$12,000	$15,000	$536,000			$ 563,000
C. Task Management					$9,530	$28,560	$ 38,090
Total Task 1	343	$24,000	$30,000	$898,000	$9,530	$28,560	**$ 990,090**
Task 2: Restoration Planning and Environmental Compliance							
A. Initiate and Manage Project			$15,070				$15,070
B. Public Involvement			$12,434				$12,434
C. Develop and analyze 3 restoration alternatives			$21,344				$21,344
D. Conduct hydraulics analyses for 3 rest. alternatives			$26,359				$26,359
E. Prepare Restoration Plan			$28,163				$28,163
F. Prepare Environmental Assessment			$20,795				$20,795
G. Task Management coordination, development of strategies/alternatives, document review.	500 perm.	$25,400			$2,500	$4,562	$32,462
Total Task 2	500 perm.	$25,400	$124,165		$2,500	$4,562	**$156,627**
Task 3: Restoration of Liberty Island							
Estimate for construction phase of Liberty Island restoration subject to development of restoration plan and cost estimate. Construction may include breaching levees, filling delivery/drainage ditches, leveling road, and creating sloughs.			$475,000				$475,000

Task	Direct Labor Hours	Direct Salary/ Benefits	Service Contracts	Material/ Acq. Costs	Misc. /other Direct Costs	Over-head Indirect Costs	Total Cost
Task Management: coordination, validation of costs, preparation/review of plans, and inspection of work in progress.	320 perm.	$16,256			$5,000	$14,888	$36,144
Total Task 3	320 perm.	$16,256	$475,000		$5,000	$14,888	**$511,144**
Task 4: Monitoring Program							
A. Fish Monitoring:							
1) General species fish use	1000 per 850 temp	$28,357		$28,000		$12,731	$69,088
2) Estimate spawner use by smelt and splittail	800 perm. 1250 tem	$33,500		$10,000		$15,886	$59,386
3) Estimate larval rearing by smelt and splittail	2120 per 2260 tem	$66,720		$4,000		$13,886	$83,796
4) Quantify salmon fry/smolt use	400 perm. 600 temp	$16,500		$4,875		$6,545	$27,920
Sub-total: Task 4(A)	4320 per 4960 tem	$145,077		$46,875		$48,238	$240,190
B. Wildlife Monitoring							
Quantify wildlife use in open water, mudflats, emergent marsh, and riparian habitats	1064 pem 480 temp.	$23,558		$2,100	$1,500	$3,080	$30,238
C. Vegetation Monitoring							
1) Characterize plant communities in different habitats and how they change over time.	334 perm.	$8,430		$650		$4,055	$13,135
2) Establish whether plant communities are sustaining and functional (GIS Analysis)	200 perm.	$7,471				$3,593	$11,064
Sub-total: Task 4(C)	534 perm.	$15,901		$650		$7,648	$24,199
D. Water Quality Monitoring: Characterize water quality in different habitats							
1) Continuous sampling	200 perm.	$10,000	$708			$4,800	$15,508

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Task	Direct Labor Hours	Direct Salary/ Benefits	Service Contracts	Material/ Acq. Costs	Misc. /other Direct Costs	Over-head Indirect Costs	Total Cost
2) Monthly sampling	442 perm.	$13,465	$2,124	$22,600		$6,463	$44,652
Sub-total: Task 4(D)	642 perm.	$23,465	$2,832	$22,600		$11,263	$60,160
E. Phytoplankton Monitoring:							
Evaluate phytoplankton production, species comp. and growth rates, nutrients and sediment concentrations	176 perm. 176 temp.	$7,000	$21,432			$7,000	$35,432
F. Zooplankton: First year already funded by CALFED FY99 in the Prospect Island Monitoring Project.							
G. Benthic Monitoring							
Evaluate benthic macrofauna and substrate composition	336 perm.	$4,656	$23,760	$1,597		$2,053	$32,066
H. Bathymetry Monitoring							
Monitor changes in different habitat and features within Liberty Island due to siltation and erosion.	1232 per	$42,800		$26,600	$7,800	$34,800	$112,000
I. Organic Carbon Monitoring							
Determine if the island is a source of organic carbon to the Delta	168 perm.	$4,120	$41,040	$25,000		$1,070	$71,230
J. Monitoring Management							
Project coordination, inspection of work in progress, validation of costs, preparation and review of reports and responses to questions.	500 perm.	$25,400			$2,600	$19,005	$47,005
Total Task 4	14,588 hr	$291,977	$89,064	$125,422	$11,900	$134,157	**$652,520**
Task 5: Operation and Maintenance of Liberty Island (3 years)							
Refuge management, maintenance, biological, law enforcement, and public use programs.	3050perm	$107,660		$189,638	$6,257	$9,107	**$312,662**

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Task	Direct Labor Hours	Direct Salary/ Benefits	Service Contracts	Material/ Acq. Costs	Misc. /other Direct Costs	Over-head Indirect Costs	Total Cost
Task 6: Acquisition two additional tracts within the proposed North Delta NWR							
A. Tract #68: 1,808 acres	343	$12,000	$30,000	$3,616,000			$3,658,000
B. Tract #64: 3,426 acres	343	$12,000	$40,000	$6,852,000			$6,904,000
C. Task Management					$10,562	$300,000	$310,562
Total Task 6	686	$24,000	$70,000	10,468,000	$10,562	$300,000*	**$10,872,562**
Total Project							**$13,495,605**

Budget Summary:

Phase	Direct Labor Hours	Direct Salary/ Benefits	Service Contracts	Material/ Acq. Costs	Misc. /other Direct Costs	Over-head Indirect Costs	Total Cost
Phase I: Liberty Island							
Task 1: Land Acquisition	343	$24,000	$30,000	$898,000	$9,530	$28,560	$990,090
Task 2: Restoration Plan	500	$25,400	$124,165		$2,500	$4,562	$156,627
Task 3: Restoration	320	$16,256	$475,000		$5,000	$14,888	$511,144
Task 4: Monitoring	14,588	$291,977	$89,064	$125,422	$11,900	$134,157	$652,520
Task 5: O&M	3050	$107,660		$189,638	$6,257	$9,107	$312,662
Total Phase I	18,801 hr	$465,293	$718,229	$1,213,060	$35,187	$191,274	$2,623,043
Phase II: North Delta NWR							
Task 6: Land Acquisition	686 hr	$24,000	$70,000	$10,468,000	$10,562	$300,000*	$10,872,562
Total Project							$13,495,605

* Total overhead will not exceed $300,000 for the project.

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Cost Sharing

Cost sharing:
The Department of Water Resources proposes to contribute up to $400,000 for the fee title acquisition and restoration of Property 4 (tract 68) under the AB360 Program.

Department of Water Resources and Department of Fish and Game will be working cooperatively with the Service in the monitoring of Prospect Island and Liberty Island. Costs for implementing both monitoring programs will be reduced because of the combined effort. Funds for monitoring the zooplankton will be provided by the Department of Water Resources through the Prospect Island CALFED grant.

Applicant Qualifications

Sacramento Realty Office: The Service currently manages over 670 square miles of habitat within the National Wildlife Refuge system in California. The Service has an ongoing land acquisition program that covers 16 refuges and wildlife management areas within the Central Valley and San Francisco Bay Area. The Sacramento Realty Office's staff of eight has over 150 years of combined experience in the areas of reality, appraisal, and environmental protection. The Sacramento Realty Office, led by Chief Howard K. Stark, will coordinate acquisition of these properties.

Biosketch: Mr. Howard K. Stark
- Multi-disciplinary qualifications as Supervisory Realty Specialist, Appraiser, Facilities Master Plans Officer, Environmental Planner.
- Over 10 years of broad-based management experience in real estate, land use planning, and environmental compliance fields with four federal agencies.
- Track record of success in managing complex projects involving high expenditures of public funds on controversial programs.
- Adept in applying negotiation skills and problem solving techniques to resolve conflicts and to achieve optimum program success.
- Initiated the $12 billion Santa Anna River Flood Control Project and managed the $6 million annual military recruiting station leasing program in Southern California as the Land Acquisition manager for the Army Corps of Engineers.
- Currently manages a Federal land acquisition program ranging from $7-$40 million annually with a $672,000 annual operating budget. The office has responsibility for the Service's realty program in the Central Valley and San Francisco Bay Area. In fiscal years 96/97 the office acquired 21.38 square miles of habitat in fee and conservation easements within California.

Stone Lakes National Wildlife Refuge Staff: Once these properties are acquired, the Stone Lakes NWR staff will coordinate restoration work with Jones and Stokes Associates, which has a long-established track record in accomplishing restoration projects. The staff, led by Project Leader Thomas E. Harvey, is currently managing nearly 1,000 acres of Service-owned land within the refuge project area and 2,600 acres of land owned by other agencies.

To date, the Service has expended a total of $4.3 million of Federal, State, and private funds to acquire lands from four willing sellers and has obtained over $2.64 million for the restoration, enhancement, and management of 1,300 acres on the refuge.

The Service is uniquely qualified to identify, acquire and manage these lands in perpetuity. Certain portions of the work may be contracted, depending upon priorities and existing work loads. There are no known conflicts of interest with parties involved in this project.

Biosketch: Mr. Thomas E. Harvey
- Has 16 years of experience with the U.S. Fish and Wildlife Service.
- Served in the capacities of refuge manager and/or biologist at three National Wildlife Refuges: Don Edwards San Francisco Bay NWR, Hawaiian and Pacific Islands NWR, and Stone Lakes NWR.
- Has played a key role at Stone Lakes NWR in the acquisition and restoration of a number of vital refuge properties and has helped direct the development of innovative partnerships with local, State, and Federal agencies, and private organizations.
- Served for three years with the Service's Sacramento Ecological Services Field Office, where he gained first-hand knowledge of numerous issues affecting the biological resources of the Central Valley and the Sacramento-San Joaquin Delta.
- Has working expertise with the procedures and challenges involved in planning new refuge units, protecting significant acreages of land through acquisition, and performing management and habitat improvements on newly-acquired properties.

Trust for Public Land (TPL): This national, non-profit conservation organization has assisted landowners, public agencies, land trusts, and others with the acquisition of thousands of acres of land to protect habitat and open space for more than 25 years. TPL will assist in this project by: 1) purchasing willing seller option agreements or 2) purchasing and holding properties until sufficient funding is available for its acquisition by the Service. It will also help by pursuing other sources of funding to leverage a grant received from CALFED. Through these services, TPL will provide in-kind contributions, including costs related to the land acquisition transactions and staff time. The Service is being assisted by Mr. Mike Reeves, Field Representative, who has completed several land conservation transactions as part of TPL's Rivers Program.

Mike Reeves has four years of land conservation experience at TPL. As a Field Representative for the Western Rivers Program, Mr. Reeves has coordinated multi-county land exchanges with the U.S. Bureau of Land Management, resulting in the conservation of several miles of riverine habitat along the Upper Sacramento River and tributaries. Mr. Reeves has several years prior experience in regional planning with the San Diego Association of Governments, the Association of Bay Area Governments, and the Sierra Economic Development District, including riparian habitat conservation and regional river parkway planning. Mr. Reeves has a B.A. in Urban Studies & Planning from UC San Diego and is an M.C.P. candidate in City and Regional Planning from UC Berkeley.

Jones and Stokes Associates:
Joe Donaldson, a licensed landscape architect (California No. 2540), will be the project coordinator for

preparation of the plan and environmental assessment for restoration of the Liberty Island Unit of the North Delta National Wildlife Refuge. Mr. Donaldson will report to the project manager for the U.S. Fish & Wildlife Service (Service) and will oversee preparation of the plan and environmental assessment. He is a natural resource planner with extensive experience preparing multi-disciplinary projects for habitat restoration and environmental compliance. Mr. Donaldson has prepared a variety of projects involving planning and management of important wildlife habitat areas and refuges and has extensive experience overseeing, managing, and working on projects for local, state, and federal agencies, including the Service. He is currently the program manager for Jones & Stokes Associates' indefinite quantities contract (IQC) with the Service for comprehensive conservation planning for national wildlife refuges and he is the principal-in-charge for the IQC for landscape architectural services for the U.S. Army Corps of Engineers, Sacramento District. He is the principal-in-charge for developing the hydrologic analysis and socioeconomic sections of the environmental assessment for establishing the North Delta National Wildlife Refuge, which includes Liberty Island. Also, he was the project coordinator for the Suitability Analysis for Enhancing Wildlife Habitat in the Yolo Basin which involved assessing the potential for restoring diverse wildlife and vegetation habitats and preserving and managing agriculture for wildlife in the 170-square-mile Yolo Basin for the Central Valley Habitat Joint Venture. The project area lies immediately north of Liberty Island. Before joining Jones & Stokes Associates, he worked for the Refuges Division of the Service as an environmental planner assisting preparation of an environmental impact statement (EIS) for endangered species management and protection for the Seal Beach NWR and Naval Weapons Station.

Mr. Donaldson received an M.A. in landscape architecture and environmental planning from Utah State University, Logan, in 1983; and a B.A. in architecture from the University of California, Berkeley, in 1975.

Additional Jones and Stokes staff: Gus Yates, John Ranlett, Warren Shaul, Steve Chainey, Alice McKee, Nicholas Dennis, and Barry Scott. (See Appendix D for their biosketches.)

Department of Water Resources and Department of Fish and Game:
Numerous professionals from the Department of Water Resources and the Department of Fish and Game will assist with monitoring on Liberty Island, including: Mike Chotkowski, Laurie Briden, Laureen Thompson, Katie Wadsworth, Jean Witzman, Kent Nelson, Peggy Lehman, James, Orsi, Cindy Messer, Howard Mann, and Collette Zemitis. (See Appendix D for their biosketches.)

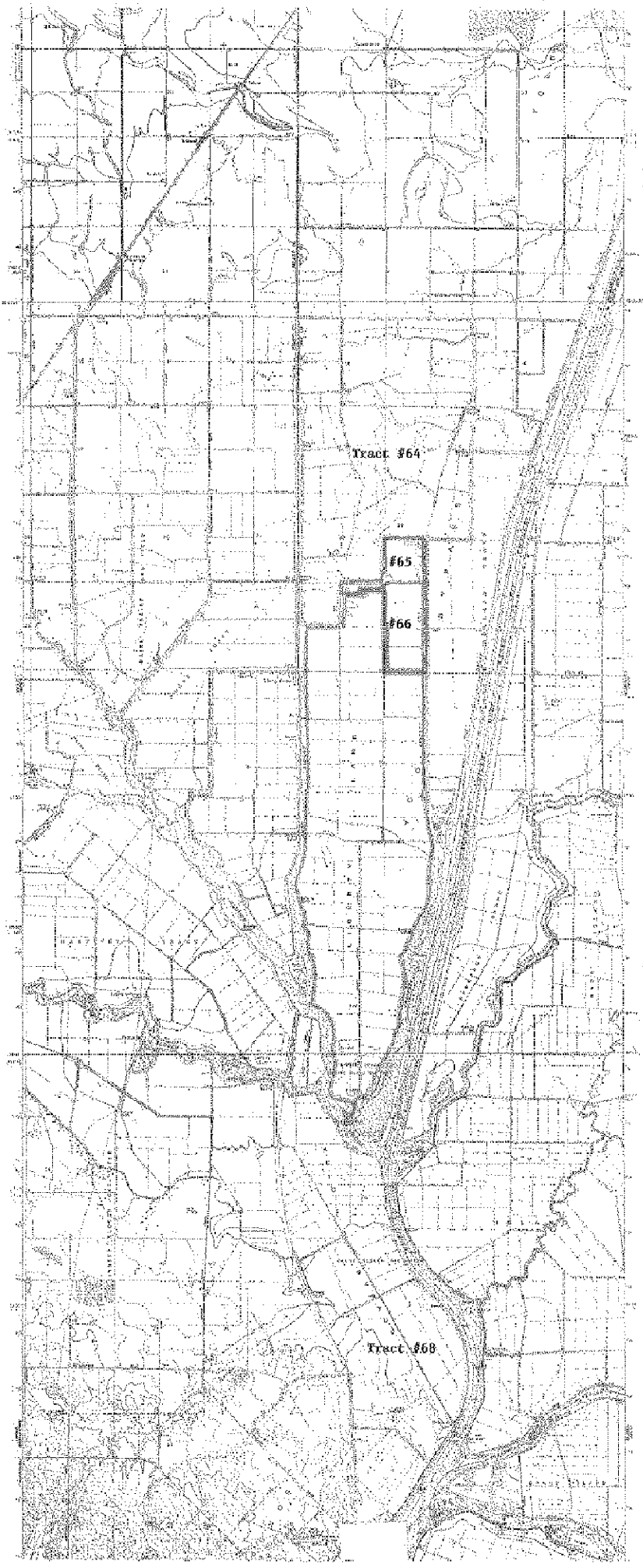
Compliance with Standard Terms and Conditions

The U.S. Fish and Wildlife Service, as federal agency acting as a representative of the public, agrees to adhere to all standard terms and conditions identified and applicable to the type of project (real estate transaction) being proposed.

Appendices

Appendix A: Map of proposed acquisitions and restoration
Appendix B: Letters of Notification:
- Delta Protection Commission
- Dave Rosenberg, Yolo County Supervisor
- Skip Thomson, Solano County Supervisor

Appendix C: Sample Planning Update
Appendix D: Additional Biosketches
Appendix E: Letters of Support
- Central Valley Habitat Joint Venture
- County of Sacramento/Dept. of Regional Parks, Recreation & Open Space
- National Audubon Society/California
- The Trust for Public Land
- Sacramento Open Space
- Sacramento Open Space Conservancy
- Sierra Club
- Stone Lakes Refuge Alliance



APPENDIX A

Legend

- Property previously funded by CALFED in 1997
- Phase I Task 1: acquisition
- Phase II Task 6: acquisition

I-016006

I-016006

Appendix B: Letters of Notification:
Delta Protection Commission
Skip Thomson, Solano County Supervisor
Dave Rosenberg, Yolo County Supervisor

I-016007

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Stone Lakes National Wildlife Refuge
2233 Watt Avenue, Suite 230
Sacramento, CA 95825
916/979-2085

IN REPLY REFER TO:

April 8, 1999

Delta Protection Commission
14215 River Road
PO Box 530
Walnut Grove, CA 95690

To Whom It May Concern:

In an effort to advance our land protection program at Stone Lakes National Wildlife Refuge (NWR) and the proposed North Delta National Wildlife Refuge, we are applying for two grants from CALFED. To comply with CALFED notification requirements, we are providing you with written notification of our plans.

For Stone Lakes NWR, the grant application to CALFED asks for funds to 1) complete full funding toward acquisition of three properties within the approved refuge project area (balance of funds provided by Packard Foundation); 2) provide full funding to Trust for Public Land to acquire a fourth property within the refuge project area on our behalf; and 3) acquire Sacramento River water rights owned by Delta Sugar Corporation near Clarksburg, which is in Yolo County.

For the proposed North Delta NWR, we are asking for approximately $2.25 million to 1) acquire property on Liberty Island from willing sellers; 2) fund the restoration planning process; and 3) begin restoration on Liberty Island.

It is our policy to work only with willing sellers and to offer them a variety of options to consider, ranging from partnering and technical assistance to easements and fee title purchase. Offers are based on fair market value of the property. Three of the parties wish to sell in fee title to the Service; the fourth prefers an agricultural easement. Options have been signed on two of the properties and a third is being negotiated now.

If you have any questions, please don't hesitate to call.

Sincerely,

Thomas E. Harvey

Thomas E. Harvey
Project Leader

I-016008

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Stone Lakes National Wildlife Refuge
2233 Watt Avenue, Suite 230
Sacramento, CA 95825
916/979-2085

IN REPLY REFER TO:

April 15, 1999

Margit Aramburu
Delta Protection Commission
14215 River Road
PO Box 530
Walnut Grove, CA 95690

Dear Ms. Aramburu:

Recently, we notified you that the U.S. Fish and Wildlife Service is applying for two CALFED grants. One grant is focused on Liberty Island and a second covers Stone Lakes National Wildlife Refuge. As we make final preparations to submit these grant requests, we have made a few adjustments on the Liberty Island proposal and wish to share the following information with you.

Liberty Island: Our grant application now requests fund to: 1) acquire the two remaining properties on Liberty Island; 2) prepare and implement a restoration plan for Liberty Island; 3) monitor the restoration effort in concert with monitoring developed for Prospect Island; 4) operate and manage the restored island for three years; and 5) acquire two additional properties near Liberty Island and within the proposed North Delta National Wildlife Refuge project area. We anticipate the full amount to fund these items will be approximately $12.8 million.

If you have any questions, please don't hesitate to call.

Sincerely,

Thomas E. Harvey

Thomas E. Harvey
Project Leader

I-016009

United States Department of the Interior

FISH AND WILDLIFE SERVICE

IN REPLY REFER TO:

Stone Lakes National Wildlife Refuge
2233 Watt Avenue, Suite 230
Sacramento, CA 95825
916/979-2085

April 9, 1999

Skip Thomson
Solano County Supervisor
580 Texas Street
Fairfield, CA 94533

Dear Mr. Thomson:

In an effort to advance our land protection program at Stone Lakes National Wildlife Refuge (NWR) and the proposed North Delta National Wildlife Refuge, we are applying for two grants from CALFED. To comply with CALFED notification requirements, we are providing you with written notification of our plans.

For Stone Lakes NWR, we are asking for funds to acquire Sacramento River water rights owned by Delta Sugar Corporation near Clarksburg, which is in Yolo County.

For the proposed North Delta NWR, we are asking for funds to 1) acquire property on Liberty Island from willing sellers; 2) fund the restoration planning process; and 3) begin restoration on Liberty Island.

It is our policy to work only with willing sellers and to offer them a variety of options to consider, ranging from partnering and technical assistance to easements and fee title purchase. If fee title sale is preferred, owners will be offered fair market value for their properties.

If you have any questions, please don't hesitate to call.

Sincerely,

Thomas E. Harvey

Thomas E. Harvey
Project Leader

I-016010

United States Department of the Interior

FISH AND WILDLIFE SERVICE

IN REPLY REFER TO:

Stone Lakes National Wildlife Refuge
2233 Watt Avenue, Suite 230
Sacramento, CA 95825
916/979-2085

April 8, 1999

Dave Rosenberg
Yolo County Supervisor
625 Court Street, Room 204
Woodland, CA 95695

Dear Mr. Rosenberg:

In an effort to advance our land protection program at Stone Lakes National Wildlife Refuge (NWR) and the proposed North Delta National Wildlife Refuge, we are applying for two grants from CALFED. To comply with CALFED notification requirements, we are providing you with written notification of our plans.

For Stone Lakes NWR, we are asking for funds to acquire Sacramento River water rights owned by Delta Sugar Corporation near Clarksburg, which is in Yolo County.

For the proposed North Delta NWR, we are asking for funds to 1) acquire property on Liberty Island from willing sellers; 2) fund the restoration planning process; and 3) begin restoration on Liberty Island.

It is our policy to work only with willing sellers and to offer them a variety of options to consider, ranging from partnering and technical assistance to easements and fee title purchase. If fee title sale is preferred, owners will be offered fair market value for their properties.

If you have any questions, please don't hesitate to call.

Sincerely,

Thomas E. Harvey

Thomas E. Harvey
Project Leader

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Stone Lakes National Wildlife Refuge
2233 Watt Avenue, Suite 230
Sacramento, CA 95825
916/979-2085

IN REPLY REFER TO:

April 15, 1999

Dave Rosenberg
Yolo County Supervisor
625 Court Street, Room 204
Woodland, CA 95695

Dear Mr. Rosenberg:

Recently, we notified you that the U.S. Fish and Wildlife Service is applying for a CALFED grant to: 1) acquire the two remaining properties on Liberty Island; and 2) prepare and implement a restoration plan. As we make final adjustments on our grant proposal, we have incorporated a few additional funding requests and wanted to share these with you.

In addition to the aforementioned items, the Service and its collaborators on the project are asking for funds to: 1) cover a monitoring program to track restoration success and compare it with similar efforts on Prospect Island; 2) pay to operate and manage the island for three years; and 3) acquire two additional properties located near Liberty Island and within the proposed boundaries for the North Delta NWR.

If you have any questions, please don't hesitate to call.

Sincerely,

Thomas E. Harvey

Thomas E. Harvey
Project Leader

I-016012

U.S. FISH & WILDLIFE SERVICE

PROPOSED NORTH DELTA NATIONAL WILDLIFE REFUGE

Planning Update

PLANNING UPDATE #3 **OCTOBER 1998**

GREETINGS !

This is the third in a series of updates from the U.S. Fish and Wildlife Service regarding the planning status for the proposed North Delta National Wildlife Refuge (NWR) in the northern Sacramento-San Joaquin Delta. Update 3 is being sent to landowners in the planning area, government agencies, public organizations, and other interested individuals.

This update summarizes the issues, concerns, and questions that were recorded during the March 4th and July 28th public open houses and written comments received during the extended comment periods. Based upon the comments received, the Service is presently evaluating the scope of the proposed project area.

WHERE WE'VE BEEN

We would like to thank those who took the time to attend the March 4th and July 28th public open houses. We have a better understanding of your concerns and desires, and we hope you have a better understanding of our proposal and the planning process. The questions, comments, and issues identified varied from full support for the proposed refuge to concern for the effect the refuge would have on landowners and agricultural operations in this part of the Delta. There were also several comments concerning the proposed refuge and its connection with the CALFED program. For more detailed information, see the CALFED Issues section of this Update. We also provided a summary of some of the more common questions and answers regarding conservation planning and wildlife habitat protection through the land acquisition process at the July 28th open house.

WHERE ARE WE ?

As a result of the open houses and written comments received during the comment periods, the following issues and concerns have been identified: impacts to agriculture, levee maintenance, and floodwater conveyance; protection and restoration of wetlands; increased fisheries habitat in the Delta; compatible public use; and landowner property rights. Several adjoining landowners also expressed an interest in being included within the study area for the proposed refuge. During our July 28th open house, we presented a new map showing an expanded study area. We are presently evaluating this study area and determining the wildlife values.

Through the public comment process, you have helped us identify four preliminary alternatives. These four alternatives, in addition to the required "No Action" alternative, represent the public desires and concerns for the establishment of this refuge as well as providing a reasonable approach for the Service in assessing this proposed refuge. Our preliminary alternatives are briefly described below. We would appreciate your feedback for consideration in preparing our environmental assessment.

PRELIMINARY ALTERNATIVES

Alternative 1 - Establish 47,000 - acre North Delta NWR Boundary

Alternative 1 is approximately 47,000 acres in size and is the largest of the refuge boundary proposals. Alternative 1 would protect a large contiguous block of habitat stretching from the southern boundary of the Yolo Basin Wildlife Area, to the southern end of the Yolo Bypass

where it meets the confluences of Cache Slough, Sacramento River and Steamboat Slough (see figure 1). Alternative 1 would provide the Service with the greatest opportunity for habitat protection in both fee title and conservation easement. It would further combine the goals of other resource management programs within this area into one effort. Approximately 39,000 acres of this area is agriculturally developed. The area also includes approximately 4,500 acres of seasonally flooded and tidally influenced wetlands, 500 acres of shaded riverine aquatic habitat, and 500 acres of riparian habitat. There is an additional 1,500 acres of levees, dikes, and roads throughout this area.

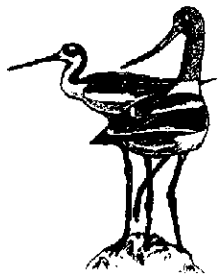
Alternative 2 - Establish 7,800 - acre North Delta NWR Boundary
Alternative 2 is approximately 7,800 acres in size. This alternative includes the initial three parcels of Prospect, Little Holland and Liberty Island, that the Service originally proposed for the refuge (see figure 2). It will also allow for the completion of presently proposed restoration and acquisition needs by the Service and other Federal and State agencies in this part of the Delta. Approximately 5,000 acres of Liberty Island is presently in agricultural development. The remaining acreage is tidally influenced wetlands with associated riparian habitat. There is approximately 300 acres in levees and roads within this proposed refuge boundary.

Alternative 3 - Establish 33,000 - acre North Delta NWR Boundary
Alternative 3 is approximately 33,000 acres in size. The proposed area incorporates existing easements within the present North Central Valley Wildlife Management Area (see figure 3). Approximately 26,000 acres of this area is agriculturally developed. There is approximately 3,500 acres of seasonally flooded, tidally influenced wetlands. The Service, in cooperation with California Department of Fish and Game, the Natural Resources Conservation Service, and other Federal and State agencies, is also actively acquiring easements within this area. Habitat protection in both fee and easement acquisitions within this cooperative area will also assist in meeting the long-term objectives of the Central Valley Habitat Joint Venture Program.

Alternative 4 - Establish 14,000 - acre North Delta NWR Boundary
Alternative 4 is approximately 14,000 acres in size. This alternative would primarily focus the Service's habitat protection efforts at the southern end of the Yolo Bypass. These lands provide the easiest opportunity for conversion to tidally influenced wetlands (see figure 4). Approximately 11,000 acres of this area is presently in agricultural development. The remaining acreage supports privately owned seasonal duck clubs, tidally influenced wetlands, as well as existing levees and roads.

KEY AREAS OF MANAGEMENT FOCUS
The primary management focus for the proposed refuge is wildlife and habitat protection and management. The Service is committed to providing high-quality, safe, and accessible wildlife-dependent interpretive, recreational, and educational opportunities at the refuge within the capabilities of available staff and budget.

Your input will be considered to help develop the refuge management plan. The documents listed in the next section, is a starting point for discussing management of the proposed North Delta NWR.



WHAT'S NEXT?
The next step in the planning process is the preparation of an environmental assessment. A land protection plan is also being prepared.

I-016014

A draft environmental assessment is scheduled for release in December of 1998. The Service will make copies available to those who request one. A 30-day comment period will follow the release of the draft assessment. During the comment period, a public meeting will be held to provide you with an opportunity to comment on the plan. If you cannot attend the public meeting, written comments will be accepted during the 30-day comment period.

FWS PLANNING DOCUMENTS

An *environmental assessment* is required whenever the Service proposes to establish a national wildlife refuge. The assessment will analyze alternative proposals for the protection of wildlife and habitat in the proposed refuge and the potential effects of those alternatives.

A *conceptual management plan* will present an overview of proposed management approaches to wildlife and habitats, public uses and wildlife-dependent recreational activities, and public outreach for the lands and waters within the proposed refuge.

A *land protection plan* will also be prepared and will be attached to the environmental assessment. The land protection plan will identify habitat protection priorities for each area of the proposed refuge.

PUBLIC MEETING

Prior to the completion of the environmental assessment, another public meeting will be held. The Service will prepare another planning update. We will announce the meeting date and place as soon as the draft environmental assessment is available for review.

PLANNING SCHEDULE

The planning schedule shown below identifies those actions which have already occurred as well as future activities. Those dates shown for future actions are anticipated dates and are subject to change. We will inform you of any changes in these dates or meetings as soon as possible.

PROPOSED PLANNING SCHEDULE

Planning Step	*Completion Date*
1st Public Open House	3/4/98
2nd Public Open House	7/28/98
Draft Environmental Assessment (EA) and Land Protection Plan released	12/98
Public Meeting	1/99
Comment period ends on EA/LPP	1/99
Final EA and LPP released	2/99
Public Notice of Decision	2/99

CALFED ISSUE

During the public meetings as well as through written comments, a concern was raised about our proposal to establish this refuge and any connection with the CALFED program. The Service's authority for proposing the establishment of a national wildlife refuge is provided under several laws and acts such as the Fish and Wildlife Act, Endangered Species Act, Migratory Bird Conservation Act, and the Refuge Recreation Act. Although the CALFED program and the Service's refuge program share many of the same goals and objectives, we have determined that there is no connection between the CALFED program and our authority to establish refuges. The Service, in proposing to establish a refuge, is mandated to comply with the requirements of the National Environmental Policy Act (NEPA). The legislation authorizing the CALFED program also provided the Secretary of the Interior, under prescribed

circumstances, with the discretion to implement actions funded through CALFED prior to completion of the CALFED EIR/EIS, provided the Federal agencies comply with the requirements of NEPA. In our efforts to comply with these requirements, we must assess the effects that our proposed project may have on other programs or actions of a similar nature in the same area. A portion of this proposed project will be funded through the CALFED program. The completion of our environmental assessment will provide the necessary documentation required by NEPA.

DIVERSE HABITATS SUPPORT A VARIETY OF WILDLIFE

The purpose of the proposed refuge is to restore a variety of Delta habitats, including tidally-influenced wetlands, to benefit many fish and wildlife species. Because of their strategic location in the Yolo Bypass, restoration of these lands will substantially improve the conveyance of floodwaters through the North Delta. Before the regulation of flows and the channelization of rivers, the Delta was characterized by sluggish river channels, oxbow and floodplain lakes, swamps, and sloughs. The region's dense tules, willows, and cottonwoods supported more than 250 species of birds and mammals.

Traditionally, these lands were converted from marshlands to farmlands, which has left most of the loamy peat soils below sea level. In recent years, the levees surrounding the islands have either been breached or overtopped by water.

Today, a diverse array of habitats lie within the proposed study area: open water, tidal emergent marsh, riparian forest, seasonal wetlands, uplands, and agricultural lands. The Delta supports over 45 species of fish and its tidally-influenced wetlands provide rearing and resting habitat for winter-run Chinook salmon, Delta smelt, and Sacramento splittail. The uplands and agricultural lands provide nesting, resting, and feeding areas for ducks, geese, swans, cranes, other waterbirds, and neotropical songbirds. The proposed refuge would also provide important habitat for seven special status species that occur in the Delta.

WHO TO CONTACT

If you have questions or would like information, please feel free to call or write us:

Information on Proposed North Delta NWR Planning Process

John Castellano, Wildlife Biologist
Sacramento Realty Field Office
U.S. Fish and Wildlife Service
2233 Watt Avenue, Suite 375
Sacramento, CA 95825-0509
(916) 979-2085

Information on Proposed North Delta NWR Management

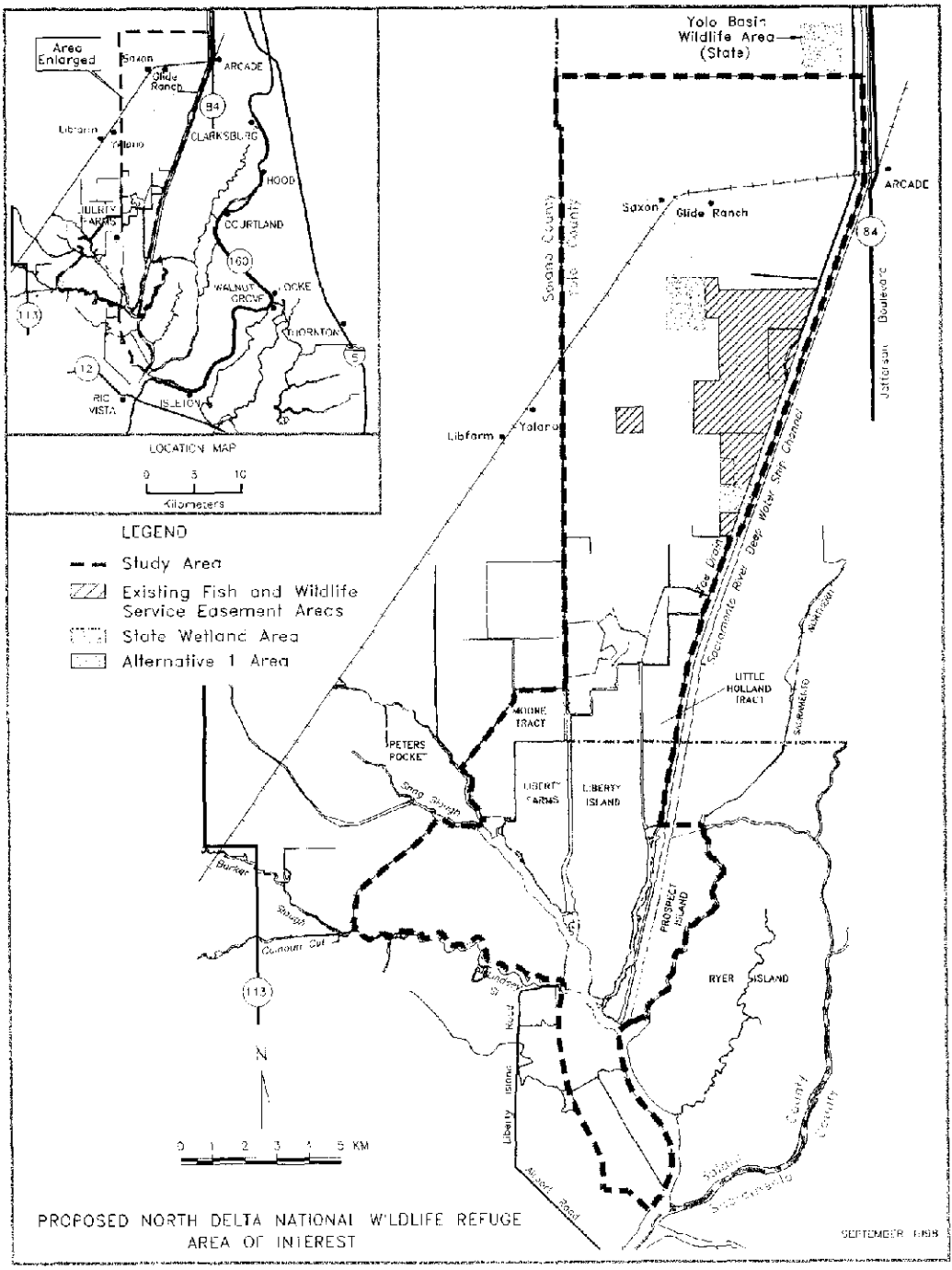
Tom Harvey, Refuge Manager
Beatrix Treiterer, Asst. Refuge Manager
Stone Lakes National Wildlife Refuge
2233 Watt Avenue, Suite 230
Sacramento, CA 95825-0509
(916) 979-2085

Information on Proposed North Delta NWR Land Acquisition

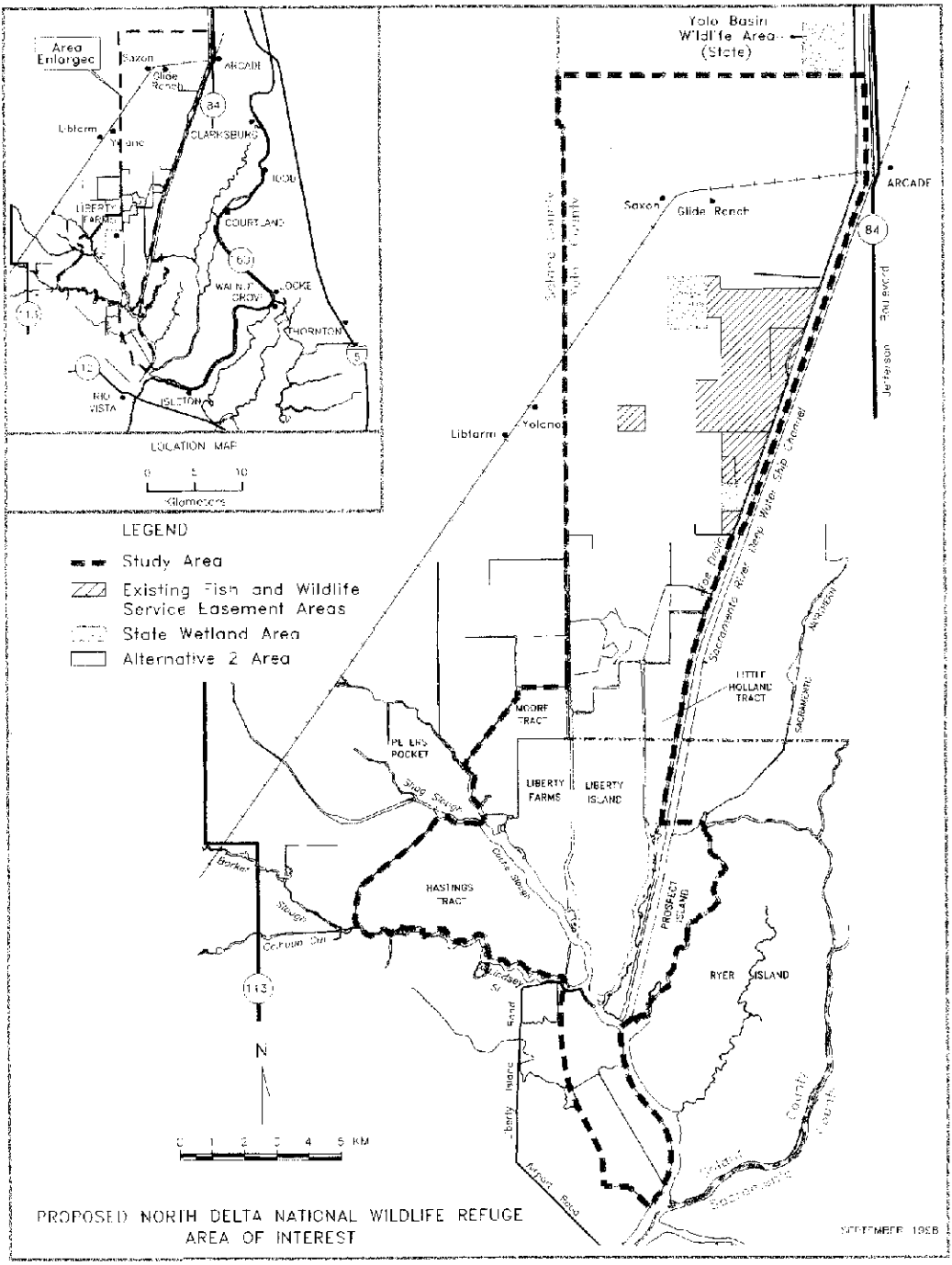
Karen Bierley, Realty Specialist
Sacramento Realty Field Office
U.S. Fish and Wildlife Service
2233 Watt Avenue, Suite 375
Sacramento, CA 95825-0509
(916) 979-2085

***Please call to be placed on our mailing list or to report a change in your mailing address.*

Alternative 1 – (47,000 Acres)

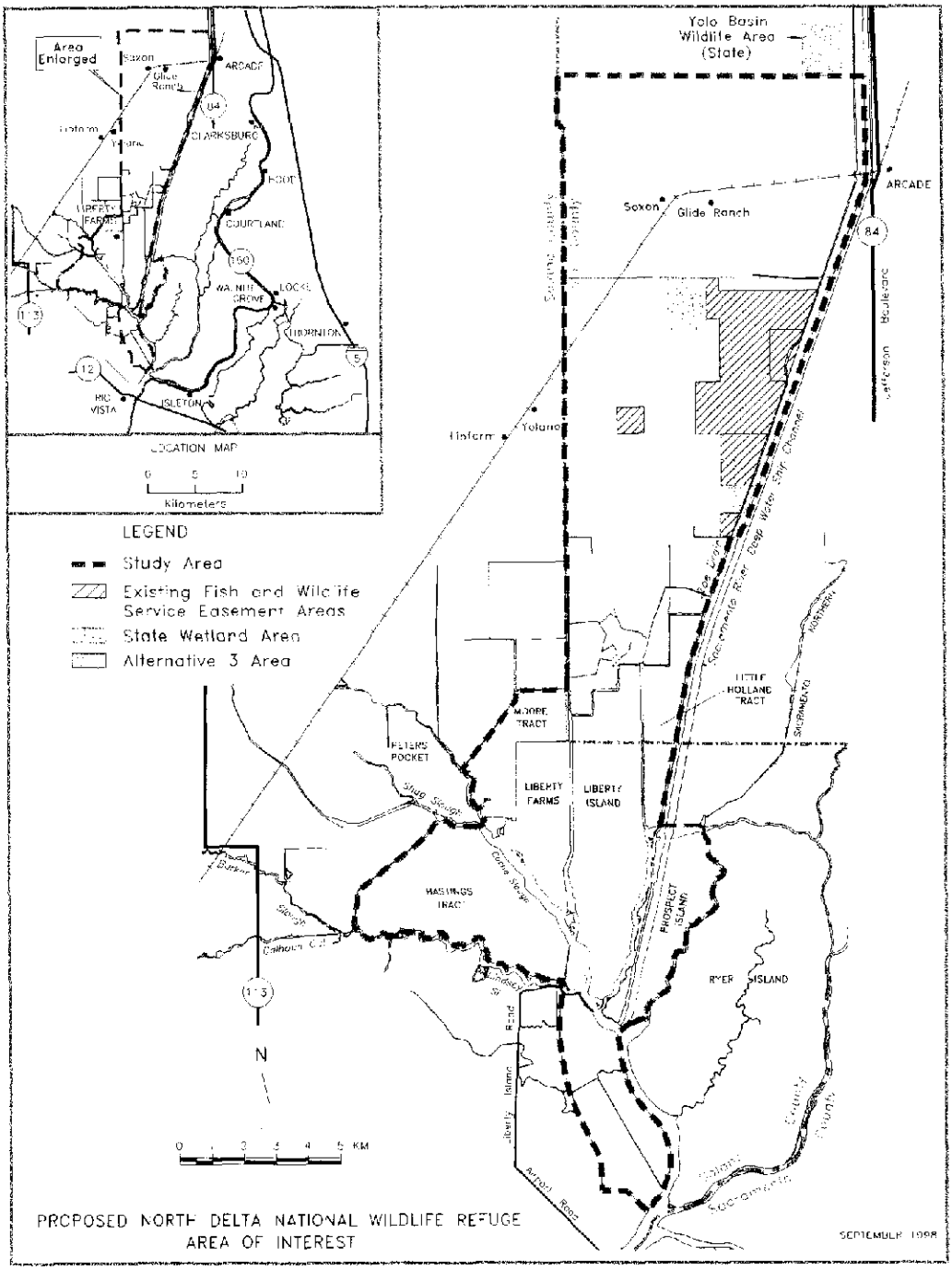


Alternative 2 – (7,800 Acres)



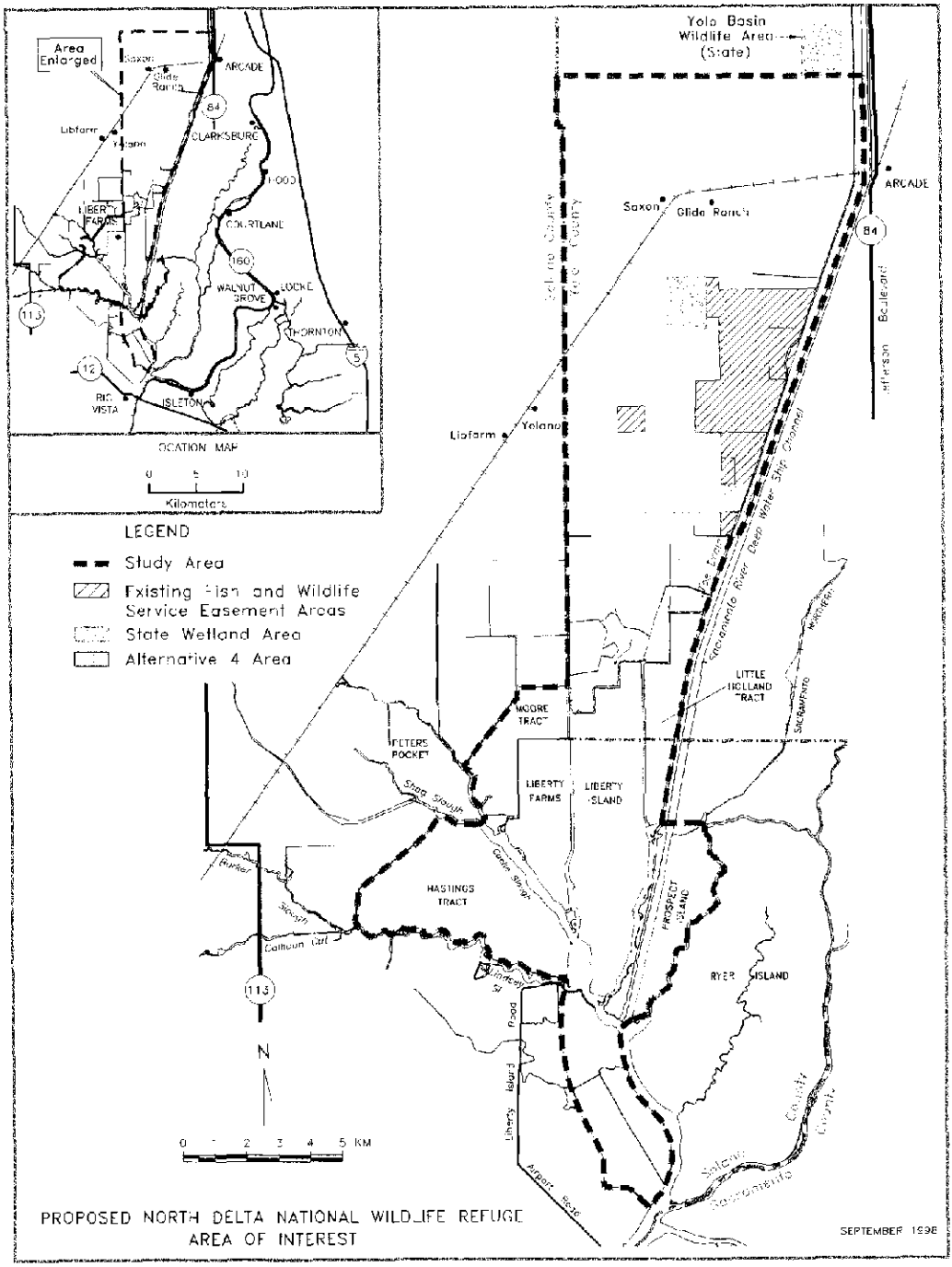
I-016018

Alternative 3 (33,000 Acres)



I-016019

Alternative 4 – (14,000 Acres)



I-016020

Appendix D: Additional Biosketches

Additional Jones and Stokes Staff: Biosketches:

Gus Yates is a hydrologist specializing in groundwater and surface-water flow modeling and habitat hydrology. Using mathematical modeling and graphical, statistical, and optimization methods, he evaluates hydrologic constraints and opportunities for aquatic, wetland, riparian, and upland habitats. Mr. Yates integrates information regarding climate, streamflow, hydrogeology, water quality, and water requirements of aquatic and riparian habitats to evaluate impacts of development projects on affected habitats and to design habitat restoration projects. His recent work includes integration of technical information related to hydrology, geomorphology, vegetation ecology, and fish biology into a conceptual and mathematical ecosystem functions model for Central Valley rivers. He also reviewed finite-element flood hydraulics models for two previous Yolo Bypass restoration efforts and used simulation results to estimate potential flood impacts of the Service proposed North Delta National Wildlife Refuge. Other local projects include development of the Willow Slough Watershed Integrated Resources Management Plan in Yolo County, and serving as the expert hydrologist in successful litigation to increase instream flows in lower Putah Creek.

Mr. Yates was certified as a professional hydrogeologist by the American Institute of Hydrology in 1992. Before joining Jones & Stokes Associates, he worked for 8 years as a groundwater hydrologist with the U.S. Geologic Survey. Mr. Yates received an M.S. in water science from the University of California, Davis, in 1985; and a B.A. in geology from Harvard University, Cambridge, Massachusetts, in 1979.

John Ranlett is a resource ecologist with Jones & Stokes Associates and is responsible for designing habitat restoration and mitigation plans that have included work in riparian and oak woodland, permanent and seasonal emergent marsh, grassland, and vernal pool habitats. These plans integrate the needs of waterfowl and other non-game wildlife, including shorebirds and songbirds, into the habitat design. Mr. Ranlett is familiar with delta wetland habitats, having conducted many years of shorebird censuses in the Delta and Yolo Bypass area while assisting Point Reyes Bird Observatory with its 5-year inland shorebird census project conducted in the early 1990s, and having assisted with wetland habitat restoration plans for several public- and private-sector restoration projects in the Delta. Mr. Ranlett is also the volunteer manager of the 430-acre Bobelaine Audubon Sanctuary, where he coordinates actions to restore the mixed riparian woodland that was destroyed by fire in 1992. He also manages avian research, including coordinating a sanctuary-wide breeding-bird census program and operating a bird-banding station that is part of a nationwide program that monitors neotropical migrant songbird populations through constant effort mist-netting and bird banding. Based on his knowledge of wetland, riparian, and floodplain habitats and the wildlife occurring there, he will ensure integration of restoration design elements that maximize benefits for fish and wildlife. Mr. Ranlett received a B.S. in biology from California State University, Sacramento, in 1985.

Warren Shaul is a senior environmental scientist and project manager with Jones & Stokes Associates. Mr. Shaul has extensive experience evaluating fisheries issues for Central Valley species to provide clear

direction in meeting habitat restoration project objectives. He first recognized the importance of floodplain habitat to juvenile chinook salmon and splittail during his field sampling in the Sutter Bypass in 1992 and 1993. Since then, he has documented passage problems and habitat use in the Sacramento and Yolo Bypasses and the floodplains of the Sacramento, Feather, and American Rivers. He has developed methods to assess impacts from proposed water-management changes on anadromous fishes in the Sacramento and San Joaquin River basins. His methods interface with hydrologic, water quality, and project operations and planning models. He is thoroughly familiar with the life history and environmental requirements of fishes throughout the Sacramento-San Joaquin River system. Mr. Shaul received an M.S. in fisheries from Oregon State University, Corvallis, in 1984; and a B.S. in biology from Humboldt State University, Arcata, California in 1972.

Steve Chainey is a plant ecologist and revegetation expert with experience in riparian and freshwater wetland restoration. Mr. Chainey has coordinated or managed natural resource management plans for the 13,000 acres of open space surrounding Concord Naval Weapons Station, the 2,500-acre buffer lands of the Sacramento Wastewater Treatment Plant, the University of California's Putah Creek Riparian Reserve, and the Yolo Basin wetlands complex. His wetland and riparian restoration projects have included Sacramento River revegetation for the Corps, irrigation canal and slough revegetation for the Yolo County Flood Control and Water Conservation District, wildlife and wetland habitat enhancements in converted flood detention basins for private developers and for the City of Davis, and several habitat mitigation projects for private developments in the Sacramento Valley.

Mr. Chainey has managed several large-scale wetland research projects, including experimental vernal pool creation for Caltrans and creation of over 250 acres of experimental watergrass wetlands under severe flooding and drawdown conditions for the Delta Wetlands project. Large-scale habitat restoration projects designed and managed by Mr. Chainey include 75 acres of mixed wetland/upland habitats on Elmwood Tract for the Grupe Development Corporation, a 600-acre riparian and wetland enhancement plan for a natural preserve on Laguna Creek for the Sacramento Regional County Sanitation District, and a 200-acre wetland and restoration project at Upper Beach Lake. His major planning and impact assessment projects included the EIS for the proposed Stone Lakes NWR in Sacramento County and the Yolo Basin Wildlife Area and Wetlands Complex Concept Plan, which involved a 110,000-acre study area slated for several thousand acres of public and private wetland and upland habitat creation. Both studies involve impact assessment and opportunities and constraints analysis of complex resource issues and land management alternatives. Mr. Chainey has additional expertise in the coordination of flood control plans and hydraulic modeling with vegetation management and landform design for habitat in floodways. He has also facilitated numerous design charrettes and conflict resolution efforts between public agencies, private landowners, and community and conservation interest groups.

Mr. Chainey received an M.S. in range and wildlands science and a B.S. in landscape architecture from the University of California, Davis, in 1987 and 1984, respectively.

Alice McKee is a licensed landscape architect (California No. 4268) and environmental restoration

specialist with experience in a variety of multidisciplinary resource management projects and studies, including conceptual design and planning, design development, and production of construction documents and written reports. Her project experience includes environmental planning; habitat restoration planning and design; design for ecologically sensitive areas; land use, open space, and natural resources management plan preparation; park, open space, and recreation trail design; interpretive exhibit design; and public involvement facilitation. Her expertise includes integrating public access, recreation, and environmental education with habitat restoration and preservation.

Ms. McKee is currently assisting with public involvement facilitation for the Lower Butte Creek project, a stakeholder-driven, grassroots effort that focuses on developing mutually beneficial solutions for improving fish passage while maintaining the viability of agricultural, seasonal wetlands, and other habitats and land use concerns; coordinating the Cosumnes and Mokelumne Rivers flood damage reduction and habitat restoration projects; and assisting the Yolo Basin Foundation with developing a Ecosystem Restoration Strategy in the Yolo Bypass under a grant from CALFED. Additional experience includes writing a multidisciplinary management plan for riparian, tidal lagoon, and upland habitat restoration at the Carmel River Lagoon site, in Carmel, California, including providing recommendations for land use, public access, and public environmental education in conjunction with habitat restoration and sensitive habitat preservation; preparing an analysis of site conditions and conceptual alternatives, including design of access trails, irrigation systems, and wildlife enhancement structures, for a multidisciplinary report on restoration of riparian and oak woodland habitats at the Friant-Kern Canal Restoration Site along the King's River in Fresno County, California; and assisting with state and federal environmental compliance for the Wildhorse project in Davis, California.

Ms. McKee received a B.L.A. in landscape architecture from the University of Oregon, Eugene, in 1994; and a B.A. in English and political science (French minor) from the University of Oregon Honors College, Eugene, in 1990.

Nicholas Dennis, Ph.D., is a project manager with Jones & Stokes Associates who has more than 20 years of experience in natural resources planning. Dr. Dennis is a registered professional forester and a resource economist. He managed watershed analyses for a program environmental impact report (EIR) for Soquel Demonstration State Forest in Santa Cruz County, for Georgia-Pacific Corporation's habitat conservation plan (HCP) for the Fort Bragg Timberlands, and for a program timberland EIR for Hearst Forests in Shasta and Siskiyou Counties. He served as the watershed task leader for a program EIR for the California Department of Forestry and Fire Protection's statewide vegetation management program.

As a resource economist, Dr. Dennis has extensive experience in developing strategies for economic development based on sustainable use of natural resources. He prepared economic impact assessments for the proposed North Delta National Wildlife Refuge (which includes Liberty Island); for wildlife refuges in Sacramento County, California and Stevens County, Washington; for a statewide habitat conservation plan for the northern spotted owl; for wild and scenic river designations for several streams in California; and for water rights allocations in the Mono Basin. He is preparing an assessment of the economic and social effects of recreation use in the Lake Tahoe Basin as part of a watershed assessment for that basin, one of

the Presidential Forum Deliverables. Dr. Dennis prepared a forest management plan for open space land in Sacramento, recommending management prescriptions for uses to include commercial forest, arboretum, recreational trails, habitat enhancement, and agriculture. He is the author of an award-winning assessment of the impacts of farmland conversion in California.

Dr. Dennis received a Ph.D. in forest economics from the University of California, Berkeley, in 1981; and an M.S. and a B.S. in forestry from the University of Wisconsin, Madison, in 1974 and 1972, respectively.

Kelly Berger has over 12 years of experience managing geographic information system (GIS) and is an expert at applying GIS technology to natural resources management and environmental analysis programs. Mr. Berger's GIS project experience includes spotted owl habitat analysis, beaver habitat analysis, watershed management and modeling programs, and urban impact analysis. He has produced GIS needs assessments for the Indian Natural Resources Agencies (through the U.S. Agency for International Development), South Tahoe Public Utility District, and the Tahoe Regional Planning Agency. Mr. Berger received a B.A. in geography (environmental planning emphasis) from the University New Mexico, Albuquerque, in 1986.

Barry Scott is an archaeologist with more than 13 years of experience in prehistoric and historic archaeology. Mr. Scott has extensive experience conducting cultural resource research, inventories, and impact evaluations. Mr. Scott meets the Secretary of the Interior's guidelines for professional qualifications to conduct archaeological studies, is certified by the Society of Professional Archaeologists in field research and museology, and has received training in the National Historic Preservation Act (NHPA), including the Section 106 process. His professional experience includes directing large and small cultural resource surveys; subsurface archaeological testing; artifact analysis; report preparation; and coordination with local, state, and federal agencies.

Since joining Jones & Stokes Associates, Mr. Scott has conducted several cultural resources investigations for compliance with California Environmental Quality Act regulations and Section 106 of the NHPA. Projects Mr. Scott has directed include a cultural resources investigation for a 600-mile-long fiber optic cable project extending from Sonoma County to southwestern Oregon; a 1,200-acre survey in Sequoia National Forest; archaeological test excavations in Monterey County; and several cultural resources investigations for water pipelines, road intersection improvements, bridge replacements, and wastewater treatment plant expansion projects throughout California.

Mr. Scott received an M.A. and a B.A. in anthropology (archaeology emphasis), from California State University, Sacramento, in 1988 and 1983, respectively.

Department of Water Resources and Department of Fish and Game: Biosketches:

Fisheries Monitoring: Field work to be conducted by one DFG biologist and two scientific aides. Data analysis and report writing to be prepared by:

Mike Chotkowski: Ph.D. Biology, M.A. Biology (Mathematical Ecology)
Biologist (M/F, Range B) with CDFG
9 years experience in marine and freshwater fish studies, with 1 year of work in the Delta; experience includes research program design, statistics, field techniques, data analysis and interpretation, and report/article preparation.

Wildlife Monitoring: Field work to be conducted by one DFG biologist and one scientific aide. Data analysis and
report writing to be prepared by:

Laurie Briden: B.A. Environmental Biology
Associate Wildlife Biologist with DFG
12 years of experience conducting threatened and endangered avian, mammalian, and herp field surveys

Laureen Thompson: B.S. Wildlife and Fisheries Biology
Range B Wildlife Biologist with DFG
7 years of technical and practical experience with the identification, management and collection of ecological data associated with avian, and mammal species. Experience includes implementing wildlife surveys, inventories, and scientific research projects and 3 years conducting threatened and endangered avian, mammalian, and herp field surveys.

Water quality: Field work to be conducted by one DWR Control Systems Engineer, one biologist, and one scientific aide. Data analysis and report writing to be prepared by Katie Wadsworth.

Katie Wadsworth: M.S. Environmental Science and B.S. Environmental Biology
Environmental Specialist III
5 years of experience in the Delta, including the design, collection, analysis, and interpretation of data.

Vegetation: Field work to be conducted by one DWR biologist and one scientific aide. Data analysis and report writing to be prepared by:

Jean Witzman: M.S. Botany and B.A. Biology Education
Environmental Specialist III with DWR
10 years experience as a professional botanist; experience in vegetation mapping, sensitive plant surveys, collection of ecological data; monitoring species and plant community response to project operations; wetland delineation; and permitting and report writing for environmental compliance.

Kent Nelson: B.S. Wildlife and Fisheries Biology
Recreation and Wildlife Resources Advisor with DWR
Eight years of experience on the Delta Flood Protection Program (SB 34), a $12 million per year

program to provide improved flood protection through levee maintenance and improvement, including comprehensive biological monitoring programs to determine benefits for fish and wildlife resources.

Phytoplankton: Field work to be conducted by one DWR biologist and one scientific aide. Data analysis and report writing to be prepared by:

Peggy Lehman: Ph.D. Ecology (aquatic ecology), M.S. Ecology,
B.S. Renewable Natural Resources
Environmental Specialist IV with DWR
15 years experience conducting research and data analysis on the influence of water quality variables on phytoplankton biomass and species composition in the Sacramento-San Joaquin Delta. Published reports and peer-reviewed journal articles on long-term trends in phytoplankton ecology and water quality.

Zooplankton: Field work to be conducted by one DWR biologist and one scientific aide. Data analysis and report writing to be prepared by:

James J. Orsi: M.S. Marine Fisheries, B.S. Biology
Senior Specialist, DFG

26 years experience as the project leader for Neomysis and zooplankton studies in the Sacramento-San Joaquin Estuary . Author of 14 published articles on mysid shrimp and zooplankton and 3 articles on fish.

Benthic Community Monitoring:

Cindy Messer: B.S. Environmental Policy Analysis and Planning
Environmental Specialist, DWR
Lead biologist for the DWR D-1485 water quality and benthic monitoring project.

Bathymetry: Field work to be conducted by two DWR engineers and one scientific aide. Data analysis and report writing to be prepared by:

Howard Mann: B.S. Civil Engineering
Senior Engineer, DWR
23 years experience including surveying, operation and maintenance of gaging stations, managing various scour monitoring programs, performing channel bottom soundings and other special studies in the Delta.

Organic Carbon: Field work to be conducted by one DWR biologist and one scientific aide. Data analysis and report writing to be prepared by Peggy Lehman and Collette Zemitis:
Peggy Lehman: Ph.D. Ecology. Environmental Specialist IV.

15 years experience in water quality in the Sacramento-San Joaquin Delta including studies in food-web ecology. (see also Phytoplankton).
Collette Zemitis: M.S. Agricultural and Environmental Chemistry and B.S. Biology.
Environmental Specialist III with DWR
4 years experience in Municipal Water Quality Investigations unit studying organic carbon and disinfection by-product precursors in the Sacramento-San Joaquin Delta.

Appendix E: Letters of Support

- Central Valley Habitat Joint Venture
- County of Sacramento/Dept. of Regional Parks, Recreation & Open Space
- National Audubon Society/California
- The Trust for Public Land
- Sacramento Open Space
- Sacramento Open Space Conservancy
- Sierra Club
- Stone Lakes Refuge Alliance

I-016028

CENTRAL VALLEY HABITAT JOINT VENTURE

North American Waterfowl Management Plan

April 13,1999

American Farmland Trust
California Waterfowl Association
Ducks Unlimited
National Audubon Society
The Nature Conservancy
The Trust for Public Land

Mr. Lester Snow
CALFED Bay-Delta Program Office
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Dear Mr Snow,

This letter acknowledges the Central Valley Habitat Joint Venture's strong support for the U.S. Fish and Wildlife Service's request for CALFED funds to help acquire properties on and begin restoration of Liberty Island.

Liberty Island is in the core of the proposed North Delta National Wildlife Refuge and in the heart of CALFED's North Delta Corridor. It's protection and restoration are vitally linked to restoration, flood control, and species recovery plans for this region. Funding of the project will help provide linkages to neighboring wildlife corridors, such as the Yolo Basin Wildlife Area and the Stone Lakes/Cosumnes Basin. It will clearly advance many of CALFED's objectives for the region.

Protection and restoration of Liberty Island, in concert with adjacent areas, will restore aquatic habitat to benefit many Priority I-IV species, including Delta smelt, salmon, and other fisheries. The newly created tidal and seasonal wetlands and riparian corridors will benefit scores of water-associated resident and migratory species, including many species at risk. All of these species are the focus of programs and recovery efforts managed by the Central Valley Habitat Joint Venture partners.

Acquisition of the remaining Liberty Island properties will allow a coordinated restoration and management effort on Liberty Island which will complement similar efforts being developed for Prospect Island and Little Holland Tract. We support such ecosystem wide management programs and urge you to give this proposal your highest consideration.

Sincerely,

Daniel Taylor
Chairman

I-016029

County of Sacramento
Department of Regional Parks, Recreation and Open Space

April 8, 1999

CALFED Bay-Delta Program Office
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Dear Sirs:

This letter is written to express strong support from Regional Parks Department and the County of Sacramento as a whole, to the grant request that Stone Lakes National Wildlife Refuge staff is submitting to CALFED to fund full acquisition of Liberty Island and its restoration.

Liberty Island lies in the core of the proposed refuge and within CALFED's North Delta Corridor. The proposed acquisition effort is greatly strengthened by the fact that the property owners are willing sellers and that the United States Fish and Wildlife Service is offering fair market value.

The proposed restoration is envisioned to: a) restore aquatic habitat to benefit Delta smelt, salmon, and other sensitive species, b) create tidal, seasonally flooded wetlands to benefit scores of water-associated resident and migratory species, including species at risk, such as the northern pintail and giant garter snake, c) link Delta habitats to other wildlife corridors, such as the Yolo Bypass Wildlife Area and the Stone Lakes/Cosumnes River Basin, and d) support the habitat, wildlife, and ecosystem goals of many other agencies and organizations, including the mission of refuges operated by the National Wildlife Refuge System.

The cost to fully acquire and restore Liberty Island would be money well spent towards Fish and Wildlife Service' proven track record of strong and effective partnerships that nurture habitat and wildlife and benefit our ecosystem.

We urge your highest consideration of Fish and Wildlife Service' grant proposal.

Sincerely,

Ron Suter
Director

cc: Tom Harvey, USFWS

jc (usfwsgrt.ltr)

3711 Branch Center Road, Sacramento, CA 95827
(916) 875-6961 FAX (916) 875-6050

National Audubon Society
California

555 Audubon Place
Sacramento, CA 95825
(916) 481-5332
(916) 481-6228 fax

April 16, 1999

CALFED Bay-Delta Program Office
1416 Ninth Street, Room 1155
Sacramento, CA 95814

Dear Bay-Delta Program Officer:

On behalf of Audubon's 67,000 members and 53 affiliated local chapters in California, I respectfully request that you support CALFED funding of $2.25 million dollars for acquisition and restoration of tidal and riparian habitats on Liberty Island within the proposed North Delta National Wildlife Refuge (NWR). The property will be acquired from willing sellers; the United States Fish and Wildlife Service (USFWS) will pay the willing sellers appraised fair market value for their properties.

Establishment of the North Delta NWR will link Delta habitats to other key regional wildlife areas (e.g. Yolo Bypass Wildlife Are, Stone Lakes/Consumnes River Basin), thereby securing a regional wildlife corridor which will ensure greater biodiversity for the North Delta/Southern Sacramento River Valley. Audubon-California supports such efforts aimed at linking critical bird habitats, and has long supported the mission of the National Wildlife Refuge System and our many public and private partners who seek to preserve the Central Valley's boiodiversity.

Acquisition of the available properties also represents a prime opportunity for restoration of critical wildlife habitat within CALFED's North Delta Corridor. Audubon-California is particularly excited about the potential for tidal wetland and riparian forest restoration projects on these properties. Restoration of these habitats would in turn benefit many at risk migratory and resident bird species such as the northern pintail.

We encourage you to support USFWS' request for CalFed funding for the North Delta Unit. Please do not hesitate to contact Audubon-California if we can be of any assistance to you as you consider this request.

Thank you for giving our concerns your attention.

Sincerely,

Daniel Taylor
Executive Director

THE TRUST FOR PUBLIC LAND

Conserving Land for People

April 14, 1999

CALFED Bay-Delta Program Office
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

To Whom It May Concern:

The Trust for Public Land (TPL) wishes to express its strong support for the funding request by the U.S. Fish & Wildlife Service (FWS) to the CALFED Bay-Delta Program, for acquisition and restoration of Liberty Island and the related properties, part of the proposed North Delta National Wildlife Refuge. TPL is working with FWS to obtain this important property.

The remainder of Liberty Island and the related properties to the north are critical to the FWS's North Delta NWR and to CALFED's efforts to restore the Delta, the source of nearly 20 million Californian's drinking water. These properties could be restored to freshwater tidal wetland and floodplain, from their current use for seasonal agriculture.

Acquisition and restoration of Liberty Island and the related properties are critical components to flood control and species recovery plans for the region. Protection of this property would also increase the Shaded Riverine Aquatic habitat (SRA) and natural water filtration, and help provide linkages to neighboring wildlife corridors, such as the Yolo Basin Wildlife Area and the Stone Lakes/Cosumnes Basin.

Restoration of Liberty Island and the related properties to tidally-influenced aquatic and wetland habitats would greatly improve regional habitat for such endangered fish species as salmon, Delta smelt, and Sacramento splittail, as well as many migratory bird species. As a secondary benefit of restoration, the resulting higher surface area to water volume ratio of these channels would improve overall water quality by enhancing oxygen levels and allowing sediments and emergent plants to absorb excess nutrients.

The Trust for Public Land
Western Region
116 New Montgomery
Third Floor
San Francisco, CA 94105

(415) 495-5660
Fax (415) 495-0541

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I-016032

TPL would assist FWS in this propsal by securing the property for eventual conveyance to FWS. TPL would also work towards securing any additional public and private funding sources needed to complete the habitat protection goals of the Refuge, as well as to leverage the CALFED Bay-Delta grant.

We hope that you join us in support of this important conservation effort, and that you give this proposal your utmost consideration. Thank you very much.

Sincerely yours,

Nelson Mathews
Western Rivers Program Director

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SACRAMENTO OPEN SPACE

S.O.S.

April 12, 1999

CALFED Bay-Delta Program Office
1416 9th Street, Suite 1155
Sacramento, CA 95814

RE: Support of Stone Lakes National Wildlife Refuge request for acquisition and restoration funding for Liberty Island

To Whom It May Concern:

Sacramento Open Space (SOS) is a local nonprofit volunteer organization which promotes the preservation and wise use of open space resources in Sacramento County and the surrounding region. We enthusiastically support the Stone Lakes National Wildlife Refuge's request for funds to purchase properties from willing sellers on Liberty Island, develop plans for restoring the island, and restore it to tidal and riparian habitats.

Liberty Island is in the core of the proposed North Delta National Wildlife Refuge, and its restoration will benefit Delta smelt, salmon and other sensitive species. Its tidal and seasonally flooded wetlands will also benefit many resident and migratory species that are at risk, such as giant garter snake and the northern pintail. In addition, it will link Delta habitats to other wildlife corridors and support the habitat, wildlife and ecosystem goals of SOS, other conservation organizations and the National Wildlife Refuge System.

The Stone Lakes Wildlife Refuge has an outstanding record of success in developing effective partnerships and tangible results. It has strong support from local agencies, elected officials, volunteer groups, schools and the general public. We encourage you to "stick with a winner" and grant the Refuge's proposal.

Sincerely,

Chris Tooker
President

SACRAMENTO OPEN SPACE * 3600 Power Inn Road, Suite B-* *. Sacramento, California 95826 * phone (916) 731-8798 * send faxes to (916) 455-4632 *

SACRAMENTO VALLEY OPEN SPACE CONSERVANCY

April 13, 1999

CALFED-Bay-Delta Program Office
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

RE: Support for Stone Lakes Refuge Land Acquisition and Restoration-Liberty Island

To whom it may concern:

The Sacramento Valley Open Space Conservancy supports the request for land acquisition and restoration of Liberty Island. The Stone Lakes Refuge is a significant resource in our region, and has the potential to house many more migratory birds and other species, including the northern pintailand giant garter snake, with additional land conservation and habitat restoration. This project will link the Refuge to other wildlife corridors, such as the Yolo Bypass and the Cosumnes River Preserve. In addition, the restoration component will provide habitat for Delta smelt, salmon, and other sensitive species.

The Sacramento Valley Open Space Conservancy (SVOSC) is a private, nonprofit, tax exempt organization which exists to facilitate the permanent protection and preservation of natural, agricultural, and recreational open space lands in the Sacramento Valley.

The Conservancy was founded in 1990 on two basic principles--that open lands are necessary for quality of life and that we must care for the land today so future generations may enjoy its physical and spiritual benefits tomorrow.

Sincerely,

Aimee B. Rutledge

P.O. Box 163351 • Sacramento, California 95816 • Phone 916/492-0908 • Fax 916/448-4120

SIERRA CLUB
FOUNDED 1892

APR 14 1999

Mother Lode Chapter
1414 K Street, Suite 300
Sacramento, CA 95814
Tel: (916) 557-1100, x 108
Fax: (916) 557-9569
www.motherlode.org

April 12, 1999

CalFED Bay-Delta Program Office
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

To Whom It May Concern:

I am sending this letter on behalf of the Mother Lode Chapter of the Sierra Club to indicate our support for efforts of the U.S. Fish and Wildlife Service to acquire property and implement restoration plans on Liberty Island.

I understand that there are willing sellers and the USFWS is offering fair market value. There is no doubt that restoration of Liberty Island will enhance the habitat values in the emerging wildlife corridor in Sacramento, Yolo, San Joaquin, and Solano counties.

Sierra Club members throughout Northern California are anxious to see wild lands protected, restored, and purchased whenever possible. We would be very pleased to see CalFED support the purchase of Liberty Island.

Please let me know if I can do anything to help with the project. I can be reached during the day at (916) 657-3465 or at *vlee2@ibm.net*.

Sincerely,

Vicki Lee

Vicki Lee
Chapter Chair

STONE LAKES REFUGE ALLIANCE

1600 DAY DRIVE • CARMICHAEL, CA 95608 • (916) 486-9624

April 8, 1999

Ms. Cindy Darling
Restoration Coordinator
CALFED Bay-Delta Program
1416 9th Street, Suite 1155
Sacramento, Ca 95814

Dear Ms. Darling,

Re: Funding for Proposed North Delta NWR Land Acquisition

For many years, the Stone Lakes Refuge Alliance has worked for public agency acquisition of wetlands in the Stone Lakes area. Our concern also extends to wildlife areas which will compliment Stone Lakes, areas including the Cosumnes River properties of The Nature Conservancy and the proposed North Delta NWR.

The alliance supports the public acquisition and restoration of Liberty Island as a critical step in the development of a North Delta NWR. This property is at the core of the proposed refuge and is within the CALFED North Delta Corridor. This new refuge will help create an invaluable wildlife complex, when combined with Stone Lakes NWR, the Yolo Bypass Wildlife Area and the Nature Conservancy's lands in the lower Cosumnes River basin.

These lands will allow the restoration and/or development of seasonally flooded wetlands useful to residential and migratory bird species. It will assist in the restoration of fish species such as salmon and Delta smelt.

As an individual who has been involved in conservation and wildlife issues in the North Delta since 1969, I am pleased to see the progress of the last few years. I hope that CALFED can continue to help in the protection and restoration of the scarce wildlife habitat in California's Great Central Valley.

Bruce Kennedy
President

Table 1. Monitoring Data Collection Information

Hypothesis/Question to be Evaluated	Data Collection and Parameters	Data Evaluation	Comments/Data Priority
Biological/Ecological Objectives			
1. What flows are necessary to drive channel migration or any other desired change in channel form?	channel form from aerial photographs, or field surveys, bed size	Compare time series channel locations and dimensions and correlate changes with hydrologic events. Sheer stress analysis.	
2. Can reservoir releases be modified to increase desirable high flows without creating undesirable water supply impacts?	USGS and other hydrologic data sources.	Model and contrast historic operations with target hydrologic regime and calculate difference in water supply yield.	
3. What reservoir releases are necessary to create overbank flows.	Stage and discharge, backwater models.	Relate water surface elevations to land surface elevations.	
4. How have various components of the Hydrograph changed as a result of reservoir operations.	daily flow data	Utilize Richter approach and statistical program to analyze changes in 33 different variables.	